Study Title COMBINED CHRONIC TOXICITY/ONCOGENICITY STUDY 2-YEAR ORAL GAVAGE STUDY IN RATS

Laboratory Project ID:

Volume 11 of 13

Number of pages in volume: Test Guidelines:	 351 U.S. EPA Health Effects Test Guidelines OPPTS 870.4300 Combined Chronic Toxicity/Carcinogenicity (1998) OECD Guidelines for the Testing of Chemicals Section 4 (No. 453) Health Effects (2009) JMAFF Japan Agricultural Chemicals Regulation Law 12 Nousan No. 8147 (2000) EEC Methods for the Determination of Toxicity Method B.33 Combined Chronic/Carcinogenicity test, Directive 88/302/EC (1988)
AUTHOR:	
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Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1415	D	Microscopic	
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1415	D	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1416	S	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass a, left. draining node for mass b, right.
		mammary gland	- swollen/thickened, tan, generalized, mild

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1416	S	Macroscopic	
		skin, subcutis	 mass, tan, mass a, left axillary area, present corresponds to antemortem observation (mass 1) approximately 5.0 cm in diameter. mass, tan, mass b, right axillary area, present corresponds to antemortem observation (nodule) approximately 1.2 cm in diameter.
1416	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		kidneys	- mineralization, pelvic, unilateral, minimal
		liver	 nephropathy, chronic progressive, bilateral, minimal focus of cellular alteration, basophilic, minimal hematopoiesis, extramedullary, minimal
		1	- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1416	S	Microscopic mammary gland	 adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass b) fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) hyperplasia, lobular, mild corresponds to macroscopic observation (mammary gland - swollen/thickened)
		pancreas stomach, nonglandular tongue uterus with cervix	 within normal limits within normal limits within normal limits dilatation, gland/lumen, mild
1417	D	Macroscopic lymph node, inguinal	 not identified, bilateral, no grade draining node for mass a, c, and d, left. draining node for mass b, right.
		pituitary gland	- enlarged, red, moderate

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1417	D	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 5.0 cm in diameter.
			- mass, tan, mass b, right inguinal area, present
			corresponds to antemortem observation (mass 2)
			approximately 3.5 cm in diameter.
			 mass, tan, mass c, anogenital region, present
			corresponds to antemortem observation (nodule)
			approximately 2.3 cm in diameter.
			 mass, tan, mass d, left inguinal area, present
			approximately 1.4 x 1.2 x 2.6 cm.
1417	D	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
bone marro bone, femu		bone marrow, femur	- within normal limits
	bone marrow, sternum	- within normal limits	
	•	- within normal limits	
		bone, sternum	- within normal limits

D - Died on Study

Group,

Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

Individual Animal Listing - FEMALE Terminal

Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1417	D	Microscopic	
		brain	- compression, ventral (pituitary tumor), moderate

liver lung

- within normal limits esophagus eyes - within normal limits - within normal limits eyes, optic nerves - degeneration/atrophy, retina, unilateral, moderate eyes, retina - within normal limits galt harderian glands - within normal limits heart - cardiomyopathy, minimal joint, tibiofemoral - within normal limits kidneys - mineralization, pelvic, bilateral, mild - mineralization, tubular, bilateral, minimal - nephropathy, chronic progressive, bilateral, minimal lacrimal glands, exorbital - within normal limits large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum - within normal limits larynx - within normal limits

- within normal limits

- focus of cellular alteration, basophilic, minimal

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1417	D	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	 fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d)
			- hyperplasia, lobular, mild
		nerve, sciatic	 degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1417	D	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1417	D	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits dilatation, gland/lumen, minimal within normal limits pituitary tumor
1418	S	Macroscopic lymph node, mandibular pituitary gland skin, subcutis	 within normal limits draining node for mass a, left. cyst, red, mild mass, tan, mass a, ventral neck, present corresponds to antemortem observation (mass 1) approximately 4.5 x 4.0 x 2.0 cm.

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1418	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			 hyperplasia, focal cortical, unilateral, mild
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			 nephropathy, chronic progressive, bilateral, minimal
		liver	 focus of cellular alteration, basophilic, mild
			 focus of cellular alteration, eosinophilic, mild
			 hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			 vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		mammary gland	 fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		pancreas	- atrophy, acinar, minimal
pituitary gland	pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death 	
			corresponds to macroscopic observation (pituitary gland - cyst)
		stomach, nonglandular	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1418	S	Microscopic tongue uterus with cervix	within normal limitswithin normal limits
1419	S	Macroscopic lymph node, axillary	 within normal limits draining node for mass f and mass g, right.
		lymph node, inguinal	 not identified, bilateral, no grade draining node for mass a and b, left, and mass c, d, and e, right.
		pituitary gland	- enlarged, moderate

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1419	S	Macroscopic	
		skin, subcutis	- mass, green, mass b, left inguinal area, present
			approximately 4.0 x 3.0 x 1.5 cm.
			- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 1.0 x 9.0 x 3.5 cm.
			 mass, tan, mass c, right inguinal area, present
			approximately 2.0 cm in diameter.
			 mass, tan, mass d, right inguinal area, present
			approximately 2.5 cm in diameter.
			 mass, tan, mass e, right inguinal area, present
			approximately 1.5 cm in diameter.
			 mass, tan, mass f, right axillary area, present
			corresponds to antemortem observation (swelling)
			approximately 5.0 x 3.5 x 2.0 cm.
			- mass, tan, mass g, right axillary area, present
			corresponds to antemortem observation (nodule)
			approximately 4.0 x 2.0 x 1.0 cm.
1440	0	vagina	- prolapse, moderate
419	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
S - Scheduled ne			

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1419	S	Microscopic	
		kidneys	 mineralization, pelvic, bilateral, minimal nephropathy, chronic progressive, bilateral, minimal
		liver	 focus of cellular alteration, basophilic, minimal hematopoiesis, extramedullary, minimal hyperplasia, bile duct, minimal
		lung lymph node, axillary	histiocytosis, alveolar, minimalwithin normal limits

Group, Animal Number	Fate	Tissue	Observations
mg/kg/day			
419	S	Microscopic	
		mammary gland	 adenocarcinoma, malignant, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b; skin, subcutis - mass e; skin, subcutis - mass g)
			 fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c; skin, subcutis - mass f)
		pancreas	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	 polyp, stromal, benign, primary, incidental, not cause of death corresponds to macroscopic observation (vagina - prolapse)

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1420	D	Macroscopic	
		eyes	- absent, left, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		eyes, retina	- absent/cannibalized, left, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		lacrimal glands, exorbital	- absent/cannibalized, left, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		lymph node, mandibular	- absent/cannibalized, left, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		salivary gland, mandibular	- absent/cannibalized, bilateral, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		salivary gland, parotid	- absent/cannibalized, left, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)
		salivary gland, sublingual	- absent/cannibalized, bilateral, no grade
			corresponds to antemortem observation (cannibalized/partially cannibalized)

D - Died on Study

1 mg/kg/day	Group, Animal Number	Fate	Tissue	Observations
1420 D Microscopic adrenal glands aorta aorta bone marrow, femur bone, femur bone, sternum bone, sternum bonal imits bone, sternum bonal imits borain esophagus esophagus eyes within normal limits eyes, optic nerves eyes, retina glatt harderian glands adrenal glands angiectasis/cystic degeneration, focal cortical, unilateral, minimal vacuolation, focal, unilateral, minimal valthin normal limits vacuolation, focal, unilateral, minimal valthin normal limits valthin normal limits vacuolation, focal, unilateral, minimal vacuolate, vacuolate, picuolate, picuolate	1 mg/kg/day			
moderate - vacuolation, focal, unilateral, minimal - aorta - within normal limits - one of pair present - within normal limits - one of pair present - within normal limits		D	Microscopic	
aorta - within normal limits bone marrow, femur - within normal limits bone marrow, sternum - within normal limits bone, femur - within normal limits bone, sternum - within normal limits bone, sternum - within normal limits brain - within normal limits esophagus - within normal limits eyes - within normal limits eyes - within normal limits one of pair present eyes, optic nerves - within normal limits eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits			adrenal glands	
bone marrow, femur bone marrow, sternum bone, femur bone, femur bone, sternum bone, sternum bone, sternum bone, sternum bone, sternum brain esophagus esophagus eyes - within normal limits eyes - within normal limits eyes - within normal limits one of pair present eyes, optic nerves eyes, retina - not examined autolysis too severe for diagnosis galt harderian glands heart - within normal limits				 vacuolation, focal, unilateral, minimal
bone marrow, sternum			aorta	- within normal limits
bone, femur			bone marrow, femur	- within normal limits
bone, sternum			bone marrow, sternum	- within normal limits
brain - within normal limits esophagus - within normal limits eyes - within normal limits one of pair present eyes, optic nerves - within normal limits eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits			bone, femur	- within normal limits
esophagus eyes - within normal limits one of pair present eyes, optic nerves eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands heart - within normal limits - within normal limits - within normal limits			bone, sternum	- within normal limits
eyes - within normal limits one of pair present eyes, optic nerves - within normal limits eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits			brain	- within normal limits
one of pair present eyes, optic nerves eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits - within normal limits			esophagus	- within normal limits
eyes, optic nerves eyes, retina - within normal limits - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits			eyes	- within normal limits
eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands heart - within normal limits - within normal limits				one of pair present
autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits			eyes, optic nerves	- within normal limits
galt - within normal limits harderian glands - within normal limits heart - within normal limits			eyes, retina	- not examined
harderian glands - within normal limits heart - within normal limits				autolysis too severe for diagnosis
heart - within normal limits			galt	- within normal limits
			harderian glands	- within normal limits
joint, tibiofemoral - within normal limits			heart	- within normal limits
			joint, tibiofemoral	- within normal limits

		1611

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1420	D	Microscopic	
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
			 nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
			one of pair present
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, mandibular	- not examined
		lymph node, mesenteric	- within normal limits
		mammary gland	- within normal limits
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1420	D	Microscopic	
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- not examined
			cannibalized
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- not examined
			cannibalized
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1420	D	Microscopic	
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- undetermined
1421	E	Macroscopic	
		lymph node, axillary	- enlarged, right, mild
			draining node for mass a.
		mammary gland	- swollen/thickened, tan, anogenital region, mild

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1421	E	Macroscopic	
		pituitary gland	- enlarged, minimal
		skin, subcutis	- mass, ulcerated, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 2.5 cm in diameter, red.
		spleen	- enlarged, mild
1421	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1421	E	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, mild
		lung	- within normal limits
		lymph node, axillary	- hyperplasia, lymphocyte/plasmacyte, medulla, mild
			corresponds to macroscopic observation (lymph node, axillary - enlarged)
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

E - Euthanized in extremis

			Terminal
Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1421	Е	Microscopic	
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- galactocele, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
			- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1421	Е	Microscopic	
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1421	E	Microscopic	
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		non-correlated macro observation	- pituitary gland - enlarged
		Cause of Death	- mammary tumor
1422	E	Macroscopic	
		ovaries	- cyst, clear, right, mild
		pituitary gland	- enlarged, severe
1422	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1422	E	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1422	Е	Microscopic	
		liver	- degeneration, cystic, focal, minimal
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	 erythrocytosis/erythrophagocytosis, sinus, mild
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1422	Е	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death corresponds to macroscopic observation (pituitary gland -
			enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1422	E	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina non-correlated macro observation Cause of Death	 within normal limits ovaries - cyst pituitary tumor
1423	Е	Macroscopic pituitary gland	- enlarged, severe
1423	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum	 within normal limits within normal limits within normal limits within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1423	Е	Microscopic	
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1423	E	Microscopic	
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1423	Е	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1423	Е	Microscopic	
		ureters	- within normal limits
			one of pair present
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1424	S	Macroscopic	
		mammary gland	- swollen/thickened, mild
			anogenital, right and left inguinal mostly affected.
		pituitary gland	- enlarged, red, severe
1424	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, mild
		kidneys	 mineralization, pelvic, bilateral, minimal
		liver	 hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			 vacuolation, periportal, minimal

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1424	S	Microscopic	
		lung	- within normal limits
		mammary gland	- galactocele, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
			- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		pancreas	- atrophy, acinar, minimal
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
1425	S	Macroscopic	
		adipose tissue	- discoloration, yellow, mild
			in white fat near left kidney.

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1425	S	Macroscopic	
		lymph node, inguinal	- within normal limits
			draining node for mass a, left.
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			approximately 2.0 cm in diameter.
		thymus	- small, mild
1425	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			 hyperplasia, focal cortical, unilateral, minimal
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, unilateral, minimal
			 nephropathy, chronic progressive, bilateral, mild
		liver	 focus of cellular alteration, basophilic, mild
			 hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, mild
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, inguinal	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1425	S	Microscopic	
		mammary gland	 fibroadenoma, benign, primary, incidental, not cause of death corresponds to macroscopic observation (skin, subcutis - mass a)
		mesentery/peritoneum	- necrosis, fat, moderate
			corresponds to macroscopic observation (adipose tissue - discoloration, yellow)
		pancreas	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, moderate
		•	corresponds to macroscopic observation (thymus - small)
			- hyperplasia, epithelial cell, minimal
		tongue	- within normal limits
		uterus with cervix	- hyperplasia, cervical fibromuscular, mild
1426	E	Macroscopic	
		lymph node, axillary	- within normal limits
		•	right is draining node for mass c. left is draining node for mass a.

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1426	E	Macroscopic	
		lymph node, inguinal	- within normal limits
			left is draining node for mass b.
		ovaries with oviducts	- cyst, clear, left, mild
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, left axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 3.0 x 2.5 x 1.7 cm.
			- mass, tan, mass b, left anogenital region, present
			corresponds to antemortem observation (mass 2)
			approximately 5.0 x 4.0 x 2.5 cm.
			- mass, tan, mass c, right axillary area, present
			corresponds to antemortem observation (nodule)
			approximately 2.0 x 1.5 x 0.7 cm
1426	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			 hyperplasia, focal medullary, bilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits

E - Euthanized in extremis

Group,			Tomina
Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1426	Е	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- carcinoma, pars distalis, malignant, secondary
			- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1426	E	Microscopic	
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
		lung	- foreign material, mild
			plant.
			- inflammation, acute, moderate
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b;
			skin, subcutis - mass c)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- exudate, nasal passage, mild
			- foreign material, minimal
			plant.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1426	Е	Microscopic	
		nose, level b	- exudate, nasal passage, mild
			- foreign material, mild
			plant.
		nose, level c	- exudate, nasal passage, minimal
			- foreign material, minimal
			plant.
		nose, level d	- exudate, nasal passage, mild
			- foreign material, mild
			plant.
		ovaries	- cyst, unilateral, mild
			corresponds to macroscopic observation (ovaries with oviducts - cyst)
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 carcinoma, pars distalis, malignant, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1426	Е	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, mild
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1426	E	Microscopic urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits within normal limits pituitary tumor
1427	D	Macroscopic pituitary gland	- enlarged, severe
1427	D	Microscopic adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal hyperplasia, focal cortical, unilateral, minimal
		aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain	 within normal limits compression, ventral (pituitary tumor), moderate

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1427	D	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1427	D	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- exudate, nasal passage, minimal
		nose, level b	- exudate, nasal passage, minimal
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

	Fate	Tissue	Observations
1 mg/kg/day			
1427	D	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1428	E	Macroscopic	
		pituitary gland	- enlarged, severe
		uterus with cervix	- enlarged, horn, mild
1428	E	Microscopic	•
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal

			remina
Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1428	Е	Microscopic	
		joint, tibiofemoral	- within normal limits
		kidneys	- hydronephrosis, unilateral, minimal
			- mineralization, pelvic, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	 adenocarcinoma, malignant, primary, incidental, not cause of death
			slide 18.
		name aciatia	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1428	Е	Microscopic	
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1428	E	Microscopic	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- dilatation, unilateral, mild
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1429	S	Macroscopic lymph node, inguinal lymph node, mandibular pituitary gland skin, subcutis	 within normal limits draining node for mass b, right. draining node for mass c, left. within normal limits draining node for mass a, bilateral. enlarged, moderate mass, tan, mass a, cervical, present corresponds to antemortem observation (mass 1) approximately 4.5 x 4.5 x 3.0 cm. mass, tan, mass b, right anogenital region, present corresponds to antemortem observation (mass 2) approximately 6.0 x 5.0 x 2.0 cm.
1429	S	Microscopic adrenal glands	 mass, tan, mass c, left inguinal area, present corresponds to antemortem observation (mass 3) approximately 3.0 cm in diameter. angiectasis/cystic degeneration, focal cortical, unilateral, moderate

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1429	S	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			 nephropathy, chronic progressive, bilateral, minimal
		liver	 focus of cellular alteration, basophilic, mild
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		mammary gland	 adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c)
		pancreas	- hyperplasia, acinar cell, focal, mild
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1430	S	Macroscopic	
		adrenal glands	- enlarged, bilateral, mild
		lymph node, axillary	- within normal limits
			draining node for mass c, left.
		lymph node, inguinal	- enlarged, right, mild
			draining node for mass a, mass b and mass d.
		pituitary gland	- enlarged, red, mild
		skin, subcutis	 mass, tan, mass a, right anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 6.0 x 4.0 x 3.5 cm.
			- mass, tan, mass b, right inguinal area, present
			approximately 1.0 cm in diameter.
			- mass, tan, mass c, left axillary area, present
			corresponds to antemortem observation (nodule)
			approximately 2.0 x 1.0 x 1.0 cm.
			- mass, tan, mass d, right anogenital region, present
			corresponds to antemortem observation (nodule)
1.400	0		approximately 2.5 x 2.0 x 1.5 cm.
1430	S	Microscopic	angicatoria/ayatia degeneration focal cortical hilatoral mild
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			corresponds to macroscopic observation (adrenal glands - enlarged)
			omargoa,

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1430	S	Microscopic	
		kidneys	 mineralization, pelvic, bilateral, minimal mineralization, tubular, unilateral, minimal
		liver	 focus of cellular alteration, basophilic, minimal hematopoiesis, extramedullary, minimal hyperplasia, bile duct, minimal vacuolation, periportal, minimal
		lung lymph node, axillary	- within normal limits - within normal limits
		lymph node, inguinal	- not examined misidentified tissue

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1430	S	Microscopic	
		mammary gland	 adenocarcinoma, malignant, primary, incidental, not cause of death
			corresponds to macroscopic observation (lymph node, inguinal - enlarged) slide 27-abd.
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d)
		pancreas	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1431	S	Macroscopic	
		adrenal glands	- enlarged, right, mild
		foot/feet	- ulcer, plantar/palmar, mild
			corresponds to antemortem observation (ulcer plantar/palmar)
		lymph node, inguinal	- within normal limits
			draining node for mass a, right.
		pituitary gland	- enlarged, red, moderate
		skin, subcutis	- mass, tan, mass a, right anogenital region, present
			approximately 2.5 x 3.0 x 1.0 cm.
1431	S	Microscopic	,
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, moderate
			corresponds to macroscopic observation (adrenal glands - enlarged)
			- hyperplasia, focal cortical, unilateral, mild
			 pheochromocytoma, benign, unilateral, primary, incidental, not cause of death

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
l mg/kg/day			
1431	S	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			 nephropathy, chronic progressive, bilateral, mild
		liver	- hyperplasia, bile duct, minimal
			 vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		mammary gland	 adenocarcinoma, malignant, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass a)
		pancreas	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1432	S	Macroscopic lymph node, iliac	 within normal limits draining node for mass a, right.
		pituitary gland skin, subcutis	 enlarged, mild mass, tan, mass a, left anogenital region, present corresponds to antemortem observation (mass 1) approximately 4.0 cm in diameter.
1432	S	Microscopic adrenal glands kidneys liver	 hyperplasia, focal medullary, unilateral, mild mineralization, pelvic, unilateral, minimal nephropathy, chronic progressive, bilateral, mild degeneration, cystic, focal, minimal
		lung lymph node, iliac	 focus of cellular alteration, basophilic, minimal focus of cellular alteration, eosinophilic, minimal hematopoiesis, extramedullary, minimal hyperplasia, bile duct, minimal within normal limits within normal limits

Individual Animal Listing - FEMALE

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I e	rm	ınal

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1432	S	Microscopic	
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		pancreas	- hyperplasia, acinar cell, focal, minimal
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
1433	Е	Macroscopic	
		pituitary gland	- enlarged, red, severe
		skin	 hair sparse, dorsal cervical region, dorsal thoracic region, moderate
			corresponds to antemortem observation (hair sparse hair absent)
1433	Е	Microscopic	,
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, moderate

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1433	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	 degeneration/atrophy, retina, bilateral, mild
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- nephropathy, chronic progressive, bilateral, mild
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

E - Euthanized in extremis

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Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1433	Е	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			 infiltration, mononuclear cell, minimal
			 vacuolation, periportal, mild
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	 hyperplasia, lobular, mild
		nerve, sciatic	 degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1433	Е	Microscopic	
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, moderate
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1433	E	Microscopic stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits thymoma, malignant, primary, incidental, not cause of death within normal limits pituitary tumor
1434	S	Macroscopic lymph node, axillary lymph node, inguinal pituitary gland	 within normal limits draining node for mass c, right. not identified, bilateral, no grade draining node for mass a, left and mass b, right. enlarged, mild

S - Scheduled necropsy E - Euthanized *in extremis*

S	Macroscopic skin, subcutis	 mass, tan, mass a, left inguinal area, present corresponds to antemortem observation (mass 1 mass 4) approximately 6.0 x 4.0 x 3.0 cm.
S	-	corresponds to antemortem observation (mass 1 mass 4)
	skin, subcutis	corresponds to antemortem observation (mass 1 mass 4)
		approximately 6.0 x 4.0 x 3.0 cm
		αρριολιπαι εί y υ.υ λ 4.υ λ 3.υ υπ.
		- mass, tan, mass b, right inguinal area, present
		corresponds to antemortem observation (mass 2)
		approximately 6.0 x 3.5 x 3.0 cm.
		- mass, tan, mass c, right axillary area, present
		corresponds to antemortem observation (mass 3)
		approximately 3.0 cm in diameter.
S	Microscopic	
	adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
	kidneys	- mineralization, pelvic, bilateral, minimal
		- mineralization, tubular, unilateral, minimal
		- nephropathy, chronic progressive, bilateral, minimal
	liver	- focus of cellular alteration, basophilic, mild
		- hematopoiesis, extramedullary, minimal
	lung	- within normal limits
	lymph node, axillary	- within normal limits
	S	adrenal glands kidneys liver lung

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1434	S	Microscopic	
		mammary gland	 adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass b) fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c)
		pancreas	- atrophy, acinar, minimal
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death corresponds to macroscopic observation (pituitary gland -
		atawa ala wa sa alawah dan	enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	 hyperplasia, squamous cell, minimal
1435	S	Macroscopic lymph node, axillary	 within normal limits draining node for mass b and mass d, right.

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1435	S	Macroscopic lymph node, inguinal ovaries pituitary gland skin, subcutis	 not identified, bilateral, no grade draining node for mass a, left and mass c, right. cyst, clear, right, mild enlarged, red, moderate mass, tan, mass a, left inguinal area, present corresponds to antemortem observation (mass 1) approximately 10.0 x 9.0 x 3.5 cm. mass, tan, mass b, right axillary area, present corresponds to antemortem observation (mass 2) approximately 2.5 cm in diameter. mass, tan, mass c, right inguinal area, present corresponds to antemortem observation (mass 3) approximately 7.0 x 5.0 x 3.5 cm. mass, tan, mass d, right axillary area, present corresponds to antemortem observation (mass 4) approximately 5.0 x 4.0 x 2.0 cm.

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1435	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			 pheochromocytoma, benign, unilateral, primary, incidental, not cause of death
		kidneys	- mineralization, pelvic, bilateral, minimal
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
			- inflammation, subacute/chronic, minimal
		lymph node, axillary	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d)
		ovaries	- cyst, unilateral, mild
			corresponds to macroscopic observation (ovaries - cyst)
		pancreas	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1435	S	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- cyst, keratin, minimal
		tongue	- within normal limits
		uterus with cervix	- hyperkeratosis, minimal
			- hyperplasia, squamous cell, minimal
1436	E	Macroscopic	
		lung with bronchi	- discoloration, tan, multiple lobes, mild
		pituitary gland	- enlarged, red, severe
1436	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hyperplasia, focal medullary, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits

S - Scheduled necropsy E - Euthanized *in extremis*

Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1436	Е	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), severe
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1436	E	Microscopic	
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
		lung	- inflammation, acute, severe
			corresponds to macroscopic observation (lung with bronchi - discoloration, tan)
			plant material.
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	 degeneration, axonal/myelin, mild
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1436	Е	Microscopic	
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1436	E	Microscopic thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 not examined within normal limits within normal limits inflammation, acute, minimal within normal limits within normal limits within normal limits within normal limits pituitary tumor
1437	S	Macroscopic adrenal glands lymph node, axillary lymph node, inguinal pituitary gland	 cyst, clear, left, mild within normal limits draining node for mass a, right. not identified, no grade draining node for mass c, bilateral and mass d, left. enlarged, severe

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1437	S	Macroscopic	
		skin, subcutis	- abscess, right inguinal area, mild
			corresponds to antemortem observation (mass 2)
			- mass, tan, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 2.5 cm in diameter.
			- mass, tan, mass c, anogenital region, present
			corresponds to antemortem observation (nodule mass 3)
			approximately 3.0 cm in diameter.
			- mass, tan, mass d, left inguinal area, present
			approximately 2.0 cm in diameter.
1437	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			corresponds to macroscopic observation (adrenal glands - cyst)
		kidneys	- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, bilateral, mild
		liver	 vacuolation, periportal, minimal
		lung	- inflammation, subacute/chronic, minimal

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1437	S	Microscopic	
		lymph node, axillary	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - abscess)
			 fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c; skin, subcutis - mass d)
		pancreas	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
1438	S	Macroscopic	
		all tissues	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1438	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, minimal
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		pancreas	- within normal limits
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1439	E	Macroscopic	
		large intestine, cecum	- focus/foci, red, mucosa, mild
		lymph node, mandibular	- discoloration, red, bilateral, mild
		pituitary gland	- enlarged, red, severe
1439	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hyperplasia, focal medullary, unilateral, mild

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1439	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- carcinoma, pars distalis, malignant, secondary
			 compression, ventral (pituitary tumor), moderate
			- hemorrhage, mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	 nephropathy, chronic progressive, unilateral, minimal
			- pyelitis, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1439	E	Microscopic	
		large intestine, cecum	- erosion/ulcer, moderate
		-	corresponds to macroscopic observation (large intestine, cecum - focus/foci, red)
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
		lung	- inflammation, subacute/chronic, minimal
		lymph node, mandibular	 erythrocytosis/erythrophagocytosis, sinus, mild
			corresponds to macroscopic observation (lymph node, mandibular - discoloration, red)
		lymph node, mesenteric	- within normal limits
		mammary gland	 fibroadenoma, benign, primary, incidental, not cause of death slide 18.
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1439	E	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 carcinoma, pars distalis, malignant, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1439	E	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1440	S	Macroscopic	
		lymph node, iliac	- not identified, bilateral, no grade
			draining node for mass a.
			draining node for mass b, right.
		skin, subcutis	- mass, tan, mass a, anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 7.0 x 7.5 x 2.5 cm.
			- mass, tan, mass b, right inguinal area, present
			approximately 2.5 x 2.0 x 1.0 cm.
1440	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, mild
			one of pair present
		kidneys	- mineralization, pelvic, bilateral, minimal
			 nephropathy, chronic progressive, unilateral, minimal

Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1440	S	Microscopic	
		liver	- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, clear, minimal
			- focus of cellular alteration, eosinophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			- vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
		pancreas	- atrophy, acinar, minimal
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- polyp, stromal, benign, primary, incidental, not cause of death
441	E	Macroscopic	
		pituitary gland	- enlarged, red, severe
441	Е	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1441	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- atrophy, unilateral, minimal
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1441	Е	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, minimal
			- vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1441	E	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate

Group, Animal Number	Fate	Tissue	Observations	
1 mg/kg/day				
1441	E	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits dilatation, gland/lumen, minimal within normal limits pituitary tumor 	
1442	E	Macroscopic lymph node, axillary lymph node, inguinal pituitary gland	 within normal limits draining node for mass b, left. not identified, right, no grade draining node for mass a. enlarged, mild 	

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1442	Е	Macroscopic	
		skin, subcutis	- mass, red, mass b, left axillary area, present
			approximately 1.5 cm in diameter.
			- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 13.0 cm in diameter.
		uterus with cervix	- enlarged, horn, mild
1442	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, mild
			 hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	 hyperplasia, granulocytic, mild
		bone marrow, sternum	 hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1442	E	Microscopic	
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1442	Е	Microscopic	
		nerve, sciatic nose, level a nose, level b nose, level c nose, level d ovaries oviducts pancreas parathyroid glands	 adenocarcinoma, malignant, primary, incidental, not cause of death corresponds to macroscopic observation (skin, subcutis - mass b) fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) hyperplasia, lobular, mild degeneration, axonal/myelin, minimal within normal limits within normal limits within normal limits cyst, unilateral, minimal within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1442	E	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		-	

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1442	Е	Microscopic	
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, moderate
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1443	E	Macroscopic	
		adrenal glands	- enlarged, left, moderate
		lymph node, axillary	- within normal limits
			draining node for mass a, left.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1443	E	Macroscopic lymph node, inguinal	 within normal limits draining node for mass b, left. draining node for mass c, right.
		ovaries skin, subcutis	 cyst, clear, right, mild mass, tan, mass a, left axillary area, present corresponds to antemortem observation (mass 1) approximately 10.0 x 6.0 x 4.5 cm. mass, tan, mass b, left inguinal area, present approximately 2.0 x 2.0 x 1.0 cm. mass, tan, mass c, anogenital region, present corresponds to antemortem observation (swelling)
	_		approximately 3.5 x 2.5 x 1.5 cm.
1443	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, severe
			corresponds to macroscopic observation (adrenal glands - enlarged)
			 hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1443	Е	Microscopic	
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- cyst, unilateral, minimal
			- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1443	Е	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	 adenocarcinoma, malignant, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal

E - Euthanized in extremis

Group,

Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

- adenoma, pars distalis, benign, primary, incidental, not cause

Individual Animal Listing - FEMALE Terminal

Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1443	E	Microscopic	
		nose, level a	 within normal limits
		nose, level b	 within normal limits

pituitary gland

nose, level c - within normal limits nose, level d - within normal limits - cyst, unilateral, mild ovaries corresponds to macroscopic observation (ovaries - cyst) oviducts - within normal limits - within normal limits pancreas parathyroid glands - within normal limits pharynx - within normal limits

of death salivary gland, mandibular - within normal limits salivary gland, parotid - within normal limits salivary gland, sublingual - within normal limits skeletal muscle, biceps femoris - within normal limits skin - within normal limits small intestine, duodenum - within normal limits small intestine, ileum - within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1443	E	Microscopic small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits within normal limits hematopoiesis, extramedullary, increased, minimal within normal limits within normal limits depletion, lymphoid, generalized, moderate within normal limits mammary tumor

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1444	E	Macroscopic	
		lymph node, iliac	- within normal limits
			draining node for mass a, bilateral.
		spleen	- enlarged, minimal
		tail	- mass, ulcerated, mass a, distal tail, present
			corresponds to antemortem observation (scabbed area nodule)
			approximately 2.5 x 2.0 x 0.5 cm, tan.
1444	E	Microscopic	
		adrenal glands	- within normal limits
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1444	Е	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, mild
		lung	- histiocytosis, alveolar, minimal
		lymph node, iliac	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild

Group, Animal Number	Fate	Tissue	Observations
mg/kg/day			
444	E	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- schwannoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (tail - mass a)
		small intestine, duodenum	- within normal limits

Individual Animal Listing - FEMALE Terminal

Group, Observations Animal Number Fate Tissue 1 mg/kg/day 1444 Ε **Microscopic** small intestine, ileum - within normal limits small intestine, jejunum - within normal limits spinal cord, cervical - within normal limits spinal cord, lumbar - within normal limits spinal cord, thoracic - within normal limits spleen - hematopoiesis, extramedullary, increased, moderate corresponds to macroscopic observation (spleen - enlarged) stomach, glandular - within normal limits stomach, nonglandular - within normal limits thymus - depletion, lymphoid, generalized, moderate thyroid gland - within normal limits tongue - within normal limits trachea - within normal limits ureters - within normal limits urinary bladder - within normal limits uterus with cervix - within normal limits vagina - within normal limits Cause of Death - schwannoma

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1445	E	Macroscopic	
		pituitary gland	- enlarged, moderate
1445	Е	Microscopic	
		adrenal glands	- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	 compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1445	E	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
			- vacuolation, periportal, mild
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		nose, level d	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1445	E	Microscopic	
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1445	E	Microscopic spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits within normal limits hyperplasia, epithelial, nonglandular, mild inflammation, minimal depletion, lymphoid, generalized, severe within normal limits pituitary tumor
1446	D	Macroscopic	
1446	D	pituitary gland Microscopic adrenal glands	 enlarged, mild angiectasis/cystic degeneration, focal cortical, bilateral, mild

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1446	D	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1446	D	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- foreign material, moderate
			plant.
			- mucus increased, mild
		liver	 focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
		lung	- foreign material, mild
			plant.
			- mucus increased, mild
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	 adenoma, benign, primary, incidental, not cause of death slide 18.
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- foreign material, minimal
			plant.
			- mucus increased, minimal

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1446	D	Microscopic	
		nose, level c	- foreign material, minimal
			plant.
		nose, level d	- foreign material, minimal
			plant.
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	 adenoma, benign, unilateral, primary, incidental, not cause of death
		pharynx	- within normal limits
		pituitary gland	- hyperplasia, diffuse, pars distalis, mild
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1446	D	Microscopic small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits hematopoiesis, extramedullary, increased, minimal within normal limits within normal limits depletion, lymphoid, generalized, moderate within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1447	S	Macroscopic	
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass a and mass b.
		lymph node, mandibular	- within normal limits
			draining node for mass c, left.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 2.0 x 1.5 x 0.5 cm.
			- mass, tan, mass b, left anogenital region, present
			corresponds to antemortem observation (nodule swelling)
			approximately 2.5 cm in diameter.
			- mass, tan, mass c, left lateral neck, present
			approximately 3.0 cm in diameter.
1447	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
l mg/kg/day			
1447	S	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, mild
			 nephropathy, chronic progressive, bilateral, mild
			- pyelitis, unilateral, minimal
		liver	- infiltration, mononuclear cell, minimal
			 multinucleated, hepatocytes, minimal
			 vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		mammary gland	 adenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c)
		pancreas	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1447	S	Microscopic	
		tongue	- hyperplasia, squamous cell, mild
			- inflammation, subacute/chronic, mild
		uterus with cervix	- within normal limits
1448	D	Macroscopic	
		cavity, thoracic	- mass, red, mass a, present
			approximately 1.2 x 1.0 x 0.7 cm. cranial to lungs and attached to the trachea.
		lymph node, mandibular	- enlarged, red, left, mild
		lymph node, mediastinal	- not identified, no grade
			draining node for mass a.
		pituitary gland	- enlarged, severe
		skin	- hair sparse, dorsal cervical region, right, mild
			corresponds to antemortem observation (hair sparse)
1448	D	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
mg/kg/day			
448	D	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	 compression, ventral (pituitary tumor), moderate
			- hemorrhage, minimal
		cavity, thoracic	- inflammation, granulomatous, moderate
			corresponds to macroscopic observation (cavity, thoracic - mass a)
			the lesion consists of multiple pyogranulomas with a central colony of bacteria, all walled off by a fibrous wall. most likely secondary to a dosing injury.
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1448	D	Microscopic	
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			 nephropathy, chronic progressive, bilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- infiltration, mononuclear cell, minimal
		lung	- inflammation, acute, moderate
		lymph node, mandibular	- dilatation, sinus, minimal
			 hyperplasia, lymphocyte/plasmacyte, medulla, mild
			corresponds to macroscopic observation (lymph node, mandibular - enlarged)
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal

oscopic , level a , level b , level c , level d es	 exudate, nasal passage, mild exudate, nasal passage, minimal within normal limits
, level a , level b , level c , level d es icts	exudate, nasal passage, minimalwithin normal limitswithin normal limitswithin normal limits
, level b , level c , level d es icts	exudate, nasal passage, minimalwithin normal limitswithin normal limitswithin normal limits
, level c , level d es ıcts	 within normal limits within normal limits within normal limits
, level d es ıcts	within normal limitswithin normal limits
es icts	- within normal limits
icts	
	- within normal limits
reas	- within normal limits
hyroid glands	- within normal limits
	one of pair present
ynx	- within normal limits
ary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
	corresponds to macroscopic observation (pituitary gland - enlarged)
ary gland, mandibular	- within normal limits
ary gland, parotid	- within normal limits
ary gland, sublingual	- within normal limits
	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1448	D	Microscopic	
		skin	- alopecia/hypotrichosis, moderate
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1448	D	Microscopic Cause of Death	- pituitary tumor
1449	D	Macroscopic lymph node, axillary	 within normal limits right, draining node for mass a. left, draining node for mass b.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	 mass, tan, mass a, right axillary area, present corresponds to antemortem observation (mass 1) approximately 8.0 x 6.0 x 4.0 cm. mass, tan, mass b, right lateral thorax, present corresponds to antemortem observation (mass 2) approximately 4.5 x 3.5 x 2.0 cm.
1449	D	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, minimal

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1449	D	Microscopic	
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- degeneration/atrophy, retina, unilateral, minimal
			- fold/rosette, retinal, unilateral, minimal
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1449	D	Microscopic	
		larynx	- within normal limits
		liver	- necrosis, focal, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			 hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	 exudate, nasal passage, minimal
		nose, level b	 exudate, nasal passage, mild
		nose, level c	 exudate, nasal passage, minimal
		nose, level d	 exudate, nasal passage, minimal
		ovaries	 hyperplasia, sex-cord/stromal, bilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits

D - Died on Study

		16	erminal
Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1449	D	Microscopic	
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1449	D	Microscopic	
		thymus	 depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	 hyperplasia, squamous cell, mild
			- inflammation, subacute/chronic, minimal
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1450	S	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass a, left.
		ovaries	- cyst, clear, left, mild
		pituitary gland	- enlarged, red, mild

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1450	S	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left axillary area, present
			corresponds to antemortem observation (nodule)
			approximately 2.0 cm in diameter.
1450	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hyperplasia, focal cortical, unilateral, minimal
		kidneys	- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		ovaries	- cyst, unilateral, mild
			corresponds to macroscopic observation (ovaries - cyst)

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1450	s	Microscopic	
		pancreas	 adenoma, islet cell, benign, primary, incidental, not cause of death
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1451	Е	Macroscopic	
		lymph node, axillary	- not identified, bilateral, no grade
			draining node for mass a, left and mass c, right.
		lymph node, inguinal	- not identified, right, no grade
			draining node for mass b.
		ovaries	- cyst, clear, right, moderate
		pituitary gland	- enlarged, moderate

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1451	E	Macroscopic	
		skin, subcutis	 mass, tan, mass a, left axillary area, present corresponds to antemortem observation (mass 1) approximately 0.8 cm in diameter mass, tan, mass c, right axillary area, present corresponds to antemortem observation (swelling) approximately 0.7 cm in diameter. mass, ulcerated, mass b, anogenital region, right, present corresponds to antemortem observation (mass 2) approximately 8.0 cm in diameter, tan.
1451	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain	 angiectasis/cystic degeneration, focal cortical, bilateral, mild hyperplasia, focal cortical, unilateral, minimal within normal limits hyperplasia, granulocytic, mild hyperplasia, granulocytic, minimal within normal limits within normal limits within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1451	E	Microscopic	
		cavity, abdominal	- mesothelioma, malignant, secondary
			see kidney (slide 1), adrenal gland (slide 5), pancreas (slide 11), and urinary bladder (slide 17).
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1451	E	Microscopic	
		liver	 focus of cellular alteration, basophilic, mild
			- infiltration, mononuclear cell, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass c)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, moderate
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1451	Е	Microscopic	
		ovaries	 mesothelioma, malignant, bilateral, primary, incidental, not cause of death corresponds to macroscopic observation (ovaries - cyst)
			one ovary has a small tumor, the other large.
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/regeneration, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1 mg/kg/day 1451	E	Microscopic small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus	 within normal limits within normal limits within normal limits within normal limits hematopoiesis, extramedullary, increased, minimal within normal limits within normal limits depletion, lymphoid, generalized, moderate
		thyroid gland	 hyperplasia, epithelial cell, minimal adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death
		tongue	 erosion/ulcer, minimal hyperplasia, squamous cell, mild inflammation, subacute/chronic, mild
		trachea ureters urinary bladder uterus with cervix vagina	 within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1451	E	Microscopic Cause of Death	- mammary tumor
1452	E	Macroscopic liver lymph node, axillary	 discoloration, tan, multiple lobes, mild within normal limits right is draining node for mass a.
		lymph node, inguinal	 within normal limits right is draining node for mass b.
		pituitary gland	- enlarged, moderate
		skin, subcutis	 mass, tan, mass b, right anogenital region, present approximately 2.5 x 2.0 x 1.0 cm. mass, ulcerated, mass a, right axillary area, present corresponds to antemortem observation (scabbed area mass 1) tan, approximately 6.0 x 5.0 x 4.0 cm.
		spleen	- enlarged, mild
1452	E	Microscopic adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate

E - Euthanized in extremis

		Tissue	Observations
1 mg/kg/day			
1452	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		•	- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1452	Е	Microscopic	
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	 fibroadenoma, benign, multiple, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass b) slide 26-2 and slide 18r-1.
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1452	E	Microscopic	
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		skin, subcutis	- fibrosarcoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1452	Е	Microscopic	
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, moderate
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	 adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death
		tongue	- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		non-correlated macro observation	- liver - discoloration, tan
		Cause of Death	- fibrosarcoma/fibroma

Fate	Tissue	Observations
E	Macroscopic	
	lymph node, inguinal	- within normal limits
		draining node for mass a, left.
	pituitary gland	- enlarged, red, mild
	skin, subcutis	- mass, ulcerated, mass a, left anogenital region, present
		corresponds to antemortem observation (mass 1)
		approximately 6.0 x 3.0 x 1.0 cm, tan.
	spleen	- enlarged, moderate
E	Microscopic	
	adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal
	aorta	- within normal limits
	bone marrow, femur	- hyperplasia, granulocytic, mild
	bone marrow, sternum	- within normal limits
	bone, femur	- within normal limits
	bone, sternum	- within normal limits
	brain	- compression, ventral (pituitary tumor), mild
	esophagus	- within normal limits
	eyes	- within normal limits
	E	E Macroscopic lymph node, inguinal pituitary gland skin, subcutis spleen E Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1453	Е	Microscopic	
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
			- pyelitis, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			 hematopoiesis, extramedullary, minimal
			- necrosis, focal, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, inguinal	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1453	E	Microscopic	
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1453	E	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1453	E	Microscopic	
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1454	S	Macroscopic	
		lymph node, inguinal	- within normal limits
		· ·	draining node for mass a, right.
		lymph node, mandibular	- within normal limits
			draining node for mass b, left, and mass c, right.
		pituitary gland	- enlarged, severe

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1454	S	Macroscopic	
		skin, subcutis	- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 4.0 x 3.5 x 2.0 cm.
			- mass, tan, mass b, left lateral neck, present
			approximately 2.0 x 1.0 x 1.0 cm.
			- mass, tan, mass c, right lateral neck, present
4454	0		approximately 1.0 x 0.5 x 0.5 cm.
1454	S	Microscopic	angicatoria/ayatia degeneration, forcel cartical, hilatoral, mild
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		kidneys	 mineralization, pelvic, bilateral, mild mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		liver	focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			- necrosis, focal, minimal
			- vacuolation, centrilobular, minimal
		lung	- within normal limits
		-	

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1454	S	Microscopic	
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		mammary gland	 adenocarcinoma, malignant, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass c)
			- fibroadenoma, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass b)
		pancreas	- atrophy, acinar, minimal
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1455	D	Macroscopic	
		pituitary gland	- enlarged, red, moderate

S - Scheduled necropsy D - Died on Study

			Terrima
Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1455	D	Macroscopic	
		skin	- abrasion/scab, sacral, mild
1455	D	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
			- hemorrhage, minimal
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
			one of pair present
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		-	

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1455	D	Microscopic	
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1455	D	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- hyperplasia, epidermal, mild
			corresponds to macroscopic observation (skin - abrasion/scab)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1455	D	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1456	D	Macroscopic	
		lymph node, axillary	- within normal limits
			left is draining node for mass a.

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1456	D	Macroscopic	
		pituitary gland	- enlarged, tan, moderate
		skin, subcutis	- mass, tan, mass a, ventral neck, present
			corresponds to antemortem observation (mass 1 scabbed area cannibalized/partially cannibalized)
			approximately 10.0 x 8.0 x 3.0 cm and appears to be partially cannibalized. extends from left lateral neck to right ventral axillary area and engulfs left forelimb.
		spleen	- enlarged, mild
1456	D	Microscopic	
		adrenal glands	 adenoma, cortical, benign, unilateral, primary, incidental, not cause of death
			- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hematopoiesis, extramedullary, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	 hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1456	D	Microscopic	
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, moderate
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, bilateral, mild
			 nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1456	D	Microscopic	
		liver	- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, mild
			- infiltration, mononuclear cell, minimal
			- leukocytosis, sinusoidal, mild
			- necrosis, moderate
		lung	- histiocytosis, alveolar, minimal
			- leukocytosis, vascular, mild
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			slide 18 and 26-1, 26-1a, 26-1b.
			 hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1456	D	Microscopic	
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1456	D	Microscopic	
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, moderate
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1457	Е	Macroscopic	
		brain .	- focus/foci, black, focal, cerebrum, mild
		ovaries	- cyst, clear, right, mild

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1457	Е	Macroscopic	
		oviducts	- cyst, clear, right, mild
		pituitary gland	- enlarged, red, moderate
1457	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- carcinoma, pars distalis, malignant, secondary
			corresponds to macroscopic observation (brain - focus/foci, black)
			- compression, ventral (pituitary tumor), moderate
			- hemorrhage, moderate
			corresponds to macroscopic observation (brain - focus/foci, black)
		esophagus	- within normal limits
		eyes	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1457	Е	Microscopic	
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- hyperplasia, focal, unilateral, minimal
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			 nephropathy, chronic progressive, bilateral, moderate
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1457	E	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- exudate, nasal passage, minimal
			- foreign material, minimal
			plant.
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
			corresponds to macroscopic observation (ovaries - cyst)
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 carcinoma, pars distalis, malignant, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

Group,

Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1457	E	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- hyperplasia, epithelial, nonglandular, moderate
			- inflammation, mild
		thymus	- hyperplasia, lymphoid, medulla, mild
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, mild
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1457	E	Microscopic uterus with cervix vagina non-correlated macro observation Cause of Death	within normal limitswithin normal limitsoviducts - cystpituitary tumor
1458	Е	Macroscopic pituitary gland thymus	enlarged, red, milddiscoloration, red, mild
1458	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus	 within normal limits compression, ventral (pituitary tumor), mild within normal limits

4		Tissue	Observations
1 mg/kg/day			
1458	Е	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1458	E	Microscopic	
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

1 mg/kg/day 1458			Observations
	Е	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		non-correlated macro observation	- thymus - discoloration, red
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1459	Е	Macroscopic	
		pituitary gland	- enlarged, red, severe
1459	E	Microscopic	•
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal
			 hyperplasia, focal medullary, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1459	E	Microscopic	
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- infiltration, mononuclear cell, minimal
			- necrosis, focal, mild
			- vacuolation, periportal, mild
		lung	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, moderate
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1459	E	Microscopic	
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1459	E	Microscopic spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits edema, mild hyperplasia, epithelial, nonglandular, mild depletion, lymphoid, generalized, severe hyperplasia, c-cell, focal, unilateral, mild within normal limits granular cell tumor, benign, primary, incidental, not cause of death pituitary tumor

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1460	S	Macroscopic adrenal glands lymph node, axillary	 enlarged, red, right, mild not identified, right, no grade draining node for mass a.
		mammary gland pituitary gland skin, subcutis	 swollen/thickened, tan, generalized, mild enlarged, red, mild mass, tan, mass a, right axillary area, present corresponds to antemortem observation (hair sparse mass 1) approximately 3.0 cm in diameter.
1460	S	Microscopic adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate corresponds to macroscopic observation (adrenal glands - enlarged)
		kidneys	 hyperplasia, tubular, unilateral, minimal mineralization, pelvic, bilateral, minimal
		liver	 hematopoiesis, extramedullary, minimal vacuolation, focal, minimal
		lung	- within normal limits

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1460	S	Microscopic	
		mammary gland	 fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		pancreas	- atrophy, acinar, mild
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
1461	E	Macroscopic lymph node, axillary	 within normal limits draining node for mass a, left.

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1461	Е	Macroscopic	
		lymph node, inguinal	- within normal limits
			draining node for mass b, left. draining node for mass c, right.
		lymph node, mandibular	- within normal limits
			draining node for mass d, right.
		pituitary gland	- enlarged, moderate
		skin, subcutis	- mass, tan, mass a, left axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 5.0 x 2.5 x 2.5 cm.
			- mass, tan, mass b, left inguinal area, present
			corresponds to antemortem observation (mass 2)
			approximately 2.0 cm in diameter.
			 mass, tan, mass d, right lateral neck, present
			approximately 1.0 cm in diameter.
			 mass, ulcerated, mass c, right inguinal area, present
			corresponds to antemortem observation (mass 3)
			approximately 1.5 cm in diameter, tan.
1461	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1461	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- degeneration/atrophy, retina, bilateral, moderate
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- cyst, unilateral, mild
		•	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1461	E	Microscopic large intestine, rectum larynx liver	 within normal limits within normal limits focus of cellular alteration, basophilic, mild hematopoiesis, extramedullary, minimal
		lung lymph node, axillary lymph node, inguinal lymph node, mandibular lymph node, mesenteric	 hyperplasia, bile duct, minimal histiocytosis, alveolar, minimal histiocytosis, sinus, mild within normal limits right inguinal not examined, misidentified tissue. erythrocytosis/erythrophagocytosis, sinus, mild within normal limits

Group, Animal Number	Fate	Tissue	Observations
mg/kg/day			
1461	Е	Microscopic	
461	E	Microscopic mammary gland nerve, sciatic nose, level a nose, level b nose, level c nose, level d ovaries oviducts pancreas	 adenocarcinoma, malignant, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d) fibroadenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) hyperplasia, lobular, mild within normal limits
		parathyroid glands	 within normal limits one of pair present
		pharynx	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1461	Е	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1461	Е	Microscopic	
		thymus	 depletion, lymphoid, generalized, moderate
			 hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1462	E	Macroscopic	
		lymph node, inguinal	- within normal limits
			draining node for mass a, left.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, left inguinal area, present
			approximately 2.5 x 2.0 x 1.0 cm.

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1462	Е	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

			Tommar
Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1462	E	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	 erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- foreign material, minimal
			plant material.
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1462	E	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1462	E	Microscopic stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits depletion, lymphoid, generalized, moderate within normal limits pituitary tumor
1463	E	Macroscopic lymph node, inguinal pituitary gland	 not identified, left, no grade draining node for mass a. enlarged, severe

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1463	E	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 9.0 cm in diameter.
1463	E	Microscopic	
		adrenal glands	 adenoma, cortical, benign, unilateral, primary, incidental, not cause of death
			 angiectasis/cystic degeneration, focal cortical, bilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), minimal
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1463	Е	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	 adenocarcinoma, malignant, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1463	Е	Microscopic	
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- hyperplasia, focal, bilateral, mild
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1463	E	Microscopic	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, moderate
		thyroid gland	 adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1464	D	Macroscopic	
		adipose tissue	- discoloration, red, mild
			white adipose near spleen.
		adrenal glands	- enlarged, right, mild
		liver	 focus/foci, tan, multiple lobes, mild
		lymph node, axillary	- within normal limits
			draining node for mass a, right.
		lymph node, inguinal	- not identified, right, no grade
			draining node for mass b.
		skin, subcutis	 mass, black, mass b, right inguinal area, present
			corresponds to antemortem observation (mass 2)
			approximately 4.0 x 3.0 x 1.5 cm.
			- mass, tan, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
		utamia with asmin	approximately 2.0 x 2.0 x 1.0 cm.
1464	D	uterus with cervix	- focus/foci, black, horn, minimal
1404	D	Microscopic adrenal glands	- angiectasis/cystic degeneration, focal cortical, unilateral,
		aurenai gianus	- anglectasis/cystic degeneration, rocal contical, unitateral, moderate
			corresponds to macroscopic observation (adrenal glands -
			enlarged)
			- hyperplasia, focal medullary, bilateral, minimal
D. Died on Study			

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1464	D	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
			- thrombus, severe
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1464	D	Microscopic large intestine, cecum large intestine, colon large intestine, rectum larynx liver lung lymph node, axillary lymph node, mandibular lymph node, mesenteric	 within normal limits within normal limits within normal limits within normal limits hematopoiesis, extramedullary, minimal necrosis, hepatocytes, centrilobular, severe corresponds to macroscopic observation (liver - focus/foci, tan) vacuolation, median cleft, mild vacuolation, periportal, mild within normal limits within normal limits within normal limits within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1464	D	Microscopic	
		mammary gland	 adenocarcinoma, malignant, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- galactocele, mild
			 hyperplasia, lobular, mild
		mesentery/peritoneum	- congestion, mild
			corresponds to macroscopic observation (adipose tissue - discoloration, red)
		nerve, sciatic	 degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, bilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1464	D	Microscopic	
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1464	D	Microscopic	
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		non-correlated macro observation	- uterus with cervix - focus/foci, black
		Cause of Death	- heart failure/atrial thrombus
1465	D	Macroscopic	
		lymph node, iliac	- within normal limits
			draining node for mass a, bilateral.
		pituitary gland	- enlarged, severe
		urinary bladder	- within normal limits
			the bladder is encompassed with mass a.
		uterus with cervix	- enlarged, body, moderate
			- mass, brown, mass a, body, present
			approximately 7.0 x 4.0 x 5.0 cm.

Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1465	D	Microscopic	
		adrenal glands	- hyperplasia, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- not examined
			autolysis too severe for diagnosis
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		•	- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1465	D	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		- vacuolation, periportal, minimal	
		lung	- within normal limits
		lymph node, iliac	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1465	D	Microscopic	
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, moderate

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1465	D	Microscopic stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix	 within normal limits within normal limits depletion, lymphoid, generalized, moderate within normal limits within normal limits within normal limits not examined leiomyosarcoma, malignant, secondary leiomyosarcoma, malignant, primary, fatal, positive cause of death corresponds to macroscopic observation (uterus with cervix -
		vagina Cause of Death	enlarged; uterus with cervix - mass a) slide 16-1, 16-1a, 16-1b, and 16-1c polyp, glandular, benign, primary, incidental, not cause of death slide 16 within normal limits - uterus tumor

			Terminal
Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1466	D	Macroscopic	
		mammary gland	- swollen/thickened, generalized, mild
		pituitary gland	- enlarged, mild
1466	D	Microscopic	
	adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal 	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits

Group,		
Animal Number	Fate	Tissue

Group, Animal Number	Fate	Tissue	Observations
mg/kg/day			
1466	D	Microscopic	
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1466	D	Microscopic	
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1466	D	Microscopic spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits depletion, lymphoid, generalized, moderate within normal limits undetermined
1467	S	Macroscopic lymph node, axillary	- within normal limits draining node for mass b, left.

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1467	S	Macroscopic	
		lymph node, inguinal	- within normal limits
			draining node for mass a and mass d, right. draining node for mass c, left.
		skin, subcutis	- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 5.0 x 4.0 x 2.0 cm.
			 mass, tan, mass b, left axillary area, present
			corresponds to antemortem observation (mass 2)
			approximately 4.0 x 2.5 x 2.0 cm.
			- mass, tan, mass c, left inguinal area, present
			corresponds to antemortem observation (mass 3)
			approximately 3.0 x 3.0 x 1.5 cm.
			 mass, tan, mass d, right anogenital region, present
			corresponds to antemortem observation (mass 4)
			approximately 6.0 x 4.5 x 3.0 cm.
		uterus with cervix	- enlarged, horn, mild
1467	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1467	S	Microscopic	
		kidneys	- hydronephrosis, bilateral, mild
			- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		liver	- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, inguinal	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass c)
			two separate tumors present (collision tumor).
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c; skin, subcutis - mass d)
		pancreas	- hyperplasia, islet cell, mild
		stomach, nonglandular	- within normal limits
		tongue	- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, mild

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1467	S	Microscopic	
		uterus with cervix	- dilatation, gland/lumen, moderate
			corresponds to macroscopic observation (uterus with cervix - enlarged)
1468	D	Macroscopic	
		animal/whole body	- body fat depleted, moderate
			corresponds to antemortem observation (thin)
		pituitary gland	- enlarged, severe
1468	D	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			- hyperplasia, focal medullary, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1468	D	Microscopic	
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- hydronephrosis, unilateral, mild
		•	- hyperplasia, tubular, unilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		-	

1 mg/kg/day 1468			
	_		
1400	D	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1468	D	Microscopic	
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		•	- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- hyperplasia, squamous cell, mild
		· ·	- inflammation, subacute/chronic, mild
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1468	D	Microscopic	
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
			 hyperplasia, cervical fibromuscular, mild
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1469	S	Macroscopic	
		pituitary gland	- enlarged, moderate
		uterus with cervix	- enlarged, cervix, moderate
1469	S	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			 hyperplasia, focal cortical, unilateral, minimal
		kidneys	 nephropathy, chronic progressive, bilateral, moderate
		liver	 focus of cellular alteration, eosinophilic, minimal
		lung	- histiocytosis, alveolar, minimal
		pancreas	- atrophy, acinar, minimal
			- hyperplasia, islet cell, mild

S - Scheduled necropsy D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1469	S	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death corresponds to macroscopic observation (pituitary gland -
		stamash nanglandular	enlarged) - within normal limits
		stomach, nonglandular	- within normal limits
		tongue uterus with cervix	
		uterus with cervix	- dilatation, gland/lumen, mild
			 hyperplasia, cervical fibromuscular, moderate corresponds to macroscopic observation (uterus with cervix - enlarged) hyperplasia, squamous cell, mild
	_		- Hyperplasia, squamous cell, filliu
1470	E	Macroscopic	
		lymph node, axillary	 within normal limits draining node for mass a, right and draining node for mass c, left.
		lymph node, inguinal	- within normal limits draining node for mass b, left.

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1470	E	Macroscopic pituitary gland skin, subcutis	 enlarged, mild mass, tan, mass b, left inguinal area, present corresponds to antemortem observation (swelling) approximately 1.7 x 0.8 x 0.4 cm in size. mass, tan, mass c, left axillary area, present approximately 1.2 x 1.5 x 0.4 cm in size. mass, ulcerated, mass a, right axillary area, present corresponds to antemortem observation (mass 1) approximately 5.7 x 2.1 x 1.4 cm in size, tan.
1470	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain	 angiectasis/cystic degeneration, focal cortical, bilateral, mild hyperplasia, focal cortical, unilateral, mild within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1470	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			 nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1470	E	Microscopic	
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	 adenocarcinoma, malignant, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b; skin, subcutis - mass c)
			 hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- atrophy, acinar, minimal
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1470	Е	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1470	E	Microscopic	
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1471	S	Macroscopic	
		pituitary gland	- enlarged, severe
1471	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, minimal
			- hyperplasia, focal cortical, unilateral, minimal

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1471	S	Microscopic	
		kidneys	- edema, papilla, bilateral, minimal
			- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			 nephropathy, chronic progressive, unilateral, minimal
		liver	- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		pancreas	- atrophy, acinar, minimal
		pituitary gland	- adenoma, pars distalis, benign, primary, incidental, not cause
		pitaliary glaria	of death
			corresponds to macroscopic observation (pituitary gland -
			enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			-

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1472	E	Macroscopic	
		liver	- cyst, clear, left lateral lobe, moderate
			approximately 1.5 cm in diameter.
		lymph node, inguinal	- within normal limits
			right is draining node for mass a.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, right anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 8.0 x 6.0 x 3.8 cm.
1472	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	 compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1472	Е	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- degeneration/atrophy, retina, unilateral, moderate
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- cyst, biliary, simple, moderate
			corresponds to macroscopic observation (liver - cyst)
			- infiltration, mononuclear cell, minimal
			- vacuolation, periportal, mild
		lung	- within normal limits
		lymph node, inguinal	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1472	Е	Microscopic	
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	 degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1472	E	Microscopic	
		salivary gland, parotid	- atrophy, minimal
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		-	

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1472	E	Microscopic	
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1473	E	Macroscopic	
		lymph node, mandibular	- within normal limits
			draining node for mass a, left.
		mammary gland	- swollen/thickened, tan, generalized, moderate
		pituitary gland	- enlarged, red, mild
		skin, subcutis	- mass, ulcerated, mass a, cervical, left, present
			corresponds to antemortem observation (mass 1 hair sparse mass 2) approximately 5.0 cm in diameter, tan.
1473	Е	Microscopic	,
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, moderate
			- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1473	Е	Microscopic	
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- hyperplasia, transitional cell, unilateral, mild
			- infarct, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- pyelitis, unilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		-	

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1473	E	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hyperplasia, bile duct, minimal
			 infiltration, mononuclear cell, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1473	E	Microscopic	
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1473	Е	Microscopic	
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1474	Е	Macroscopic	
		pituitary gland	- enlarged, severe

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1474	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	 compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

E - Euthanized in extremis

			Terminal
Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1474	E	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	 erythrocytosis/erythrophagocytosis, sinus, mild
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1474	Е	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death corresponds to macroscopic observation (pituitary gland -
			enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1474	E	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 hyperplasia, c-cell, focal, unilateral, minimal within normal limits pituitary tumor
1475	S	Macroscopic lymph node, inguinal pituitary gland skin, subcutis uterus with cervix	 within normal limits draining node for mass a, right. enlarged, red, severe mass, tan, mass a, right inguinal area, present corresponds to antemortem observation (mass 1 skin discolored) approximately 1.0 x 2.0 x 1.0 cm, surrounded by fluid filled cyst that ruptured. enlarged, horn, minimal

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1475	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		liver	- hematopoiesis, extramedullary, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, inguinal	- within normal limits
		mammary gland	 adenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a)
		pancreas	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1476	D	Macroscopic	
		adrenal glands	- enlarged, left, mild
		kidneys	- dilatation, pelvic, bilateral, mild
		lymph node, iliac	- enlarged, right, mild
			draining node for mass b.
		skin, subcutis	- mass, ulcerated, mass b, anogenital region, present
			corresponds to antemortem observation (mass 2)
			approximately 6.0 cm in diameter, tan.
		urinary bladder	 distended with urine, red, severe
1476	D	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	 hyperplasia, granulocytic, mild
		bone marrow, sternum	 hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1476	D	Microscopic	
		brain .	- within normal limits
		clitoral glands	carcinoma, squamous cell, malignant, unilateral, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, mild
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			- hydronephrosis, bilateral, mild
			corresponds to macroscopic observation (kidneys - dilatation, pelvic)
			 mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1476	D	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, iliac	 hyperplasia, lymphocyte/plasmacyte, medulla, mild
			corresponds to macroscopic observation (lymph node, iliac - enlarged)
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits

D - Died on Study

Individual Animal Listing - FEMALE

- 1	eri	nι	na

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1476	D	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1476	D	Microscopic	
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- dilatation, bilateral, moderate
		urinary bladder	- dilatation, moderate
			corresponds to macroscopic observation (urinary bladder - distended with urine)
			- hemorrhage, severe
			corresponds to macroscopic observation (urinary bladder - distended with urine)
			- hyperplasia, simple transitional cell, mild
			- inflammation, moderate
		uterus with cervix	- dilatation, gland/lumen, minimal
		vagina	- within normal limits
		Cause of Death	- clitoral gland tumor

Group,

Combined Chronic Toxicity/Oncogenicity Study 2-Year Oral Gavage Study in Rats

Individual Animal Listing - FEMALE Terminal

Observations Animal Number Fate Tissue 1 mg/kg/day 1477 Ε Macroscopic pituitary gland - enlarged, red, severe 1477 Ε Microscopic adrenal glands - angiectasis/cystic degeneration, focal cortical, bilateral, moderate - within normal limits aorta bone marrow, femur - within normal limits bone marrow, sternum - within normal limits bone, femur - within normal limits - within normal limits bone, sternum brain - compression, ventral (pituitary tumor), moderate - within normal limits esophagus - within normal limits eyes

within normal limitswithin normal limits

- within normal limits

- within normal limits

- within normal limits

- cardiomyopathy, minimal

eyes, optic nerves

harderian glands

joint, tibiofemoral

eyes, retina

galt

heart

E - Euthanized in extremis

			Terminal
Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1477	Е	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			 nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- vacuolation, periportal, mild
		lung	- within normal limits
		lymph node, mandibular	 erythrocytosis/erythrophagocytosis, sinus, mild
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1477	Е	Microscopic	
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1477	Е	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, lymphoid, medulla, mild
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1478	E	Macroscopic	
		lymph node, axillary	- within normal limits
			left is draining node for mass a, right is draining node for mass b.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1478	E	Macroscopic pituitary gland skin, subcutis	 enlarged, red, severe mass, tan, mass b, right axillary area, present corresponds to antemortem observation (mass 2) approximately 4.0 x 3.4 x 2.0 cm. mass, ulcerated, mass a, left axillary area, present corresponds to antemortem observation (mass 1) approximately 4.5 x 3.0 x 2.2 cm. tan in color.
1478	E	Microscopic adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal hyperplasia, focal cortical, bilateral, minimal
		aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus	 within normal limits compression, ventral (pituitary tumor), moderate within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1478	E	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, axillary	- hyperplasia, lymphocyte/plasmacyte, medulla, mild
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1478	E	Microscopic	
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			 fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	 degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, bilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1478	Е	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
			- hyperplasia, lymphoid, medulla, mild
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1478	Е	Microscopic ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits dilatation, gland/lumen, mild within normal limits mammary tumor
1479	E	Macroscopic lymph node, inguinal lymph node, mandibular pituitary gland skin, subcutis	 within normal limits draining node for mass a, left. within normal limits draining node for mass b, bilateral. enlarged, red, mild mass, red, mass b, ventral thorax, present corresponds to antemortem observation (nodule) approximately 1.5 cm in diameter. mass, ulcerated, mass a, left anogenital region, present corresponds to antemortem observation (mass 1)

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1479	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			- hyperplasia, focal medullary, bilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), minimal
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, mild
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1479	Е	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, mild
		lymph node, mesenteric	- within normal limits
		mammary gland	 adenocarcinoma, malignant, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
			- inflammation, subacute/chronic, minimal
		nose, level a	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1479	Е	Microscopic	
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1479	E	Microscopic	
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, mild
			- hyperplasia, epithelial cell, mild
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1480	Е	Macroscopic	
		ovaries .	- cyst, red, right, moderate
		pituitary gland	- enlarged, severe
		uterus with cervix	- enlarged, body, mild
1480	Е	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1480	Е	Microscopic	
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- pyelitis, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1480	Е	Microscopic	
		ovaries	- cyst, unilateral, moderate
			corresponds to macroscopic observation (ovaries - cyst)
			 luteoma, benign, unilateral, primary, incidental, not cause of death
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
1 mg/kg/day			
1480	E	Microscopic	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			 hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	 hyperplasia, cervical fibromuscular, moderate
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1491	S	Macroscopic	
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass a.
		pituitary gland	- enlarged, moderate
		skin, subcutis	- mass, ulcerated, mass a, left inguinal area, present
			corresponds to antemortem observation (abrasion(s) mass 1)
			approximately 4.0 x 3.0 x 1.0 cm, tan.
1491	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal
			 hyperplasia, focal medullary, unilateral, minimal
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		liver	- angiectasis, mild
			- focus of cellular alteration, basophilic, minimal
		lung	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		pancreas	- atrophy, acinar, minimal
			- hyperplasia, islet cell, minimal

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1491	S	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1492	Е	Macroscopic	
		pituitary gland	- enlarged, red, severe
1492	Е	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1492	E	Microscopic	
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- degeneration/atrophy, retina, bilateral, minimal
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
			- mineralization, tubular, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1492	E	Microscopic	
		liver	- focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

		T C	Similar
Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1492	Е	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1492	E	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits pituitary tumor
1493	D	Macroscopic liver lymph node, inguinal pituitary gland skin skin, subcutis	 focus/foci, red, multiple lobes, mild not identified, left, no grade draining node for mass a. enlarged, red, severe hair sparse, ventral thorax, head, mild corresponds to antemortem observation (hair sparse) mass, tan, mass a, left inguinal area, present approximately 1.0 x 1.0 x 0.5 cm.

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1493	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1493	D	Microscopic	
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	 hyperplasia, bile duct, minimal
		lung	 histiocytosis, alveolar, minimal
		lymph node, inguinal	- within normal limits
			slide 26-1.
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	 adenocarcinoma, malignant, primary, incidental, not cause of death
			corresponds to macroscopic observation (skin, subcutis - mass a)
			 hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1493	D	Microscopic	
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1493	D	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		non-correlated macro observation	- liver - focus/foci, red
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations	
50 mg/kg/day				
1494	E	Macroscopic		
		liver	- focus/foci, red, right lateral lobe, minimal	
		ovaries	- cyst, clear, left, mild	
		pituitary gland	- enlarged, red, severe	
		uterus with cervix	- enlarged, horn, mild	
1494	E	Microscopic		
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate 	
		aorta	- within normal limits	
		bone marrow, femur	- within normal limits	
		bone marrow, sternum	- within normal limits	
		bone, femur	- within normal limits	
		bone, sternum	- within normal limits	
		brain	 compression, ventral (pituitary tumor), moderate 	
		esophagus	- within normal limits	
		eyes	- within normal limits	
		eyes, optic nerves	- within normal limits	
		eyes, retina	- within normal limits	
		galt	- within normal limits	

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
<u>50 mg/kg/day</u> 1494	E	Microscopic harderian glands heart joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum larynx liver	 within normal limits cardiomyopathy, minimal within normal limits mineralization, pelvic, bilateral, mild nephropathy, chronic progressive, bilateral, minimal within normal limits orresponds to macroscopic observation (liver - focus/foci, red) focus of cellular alteration, basophilic, minimal hematopoiesis, extramedullary, minimal hyperplasia, bile duct, minimal vacuolation, periportal, mild within normal limits
		lymph node, mandibular lymph node, mesenteric	within normal limitswithin normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1494	Е	Microscopic	
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
			corresponds to macroscopic observation (ovaries - cyst)
		oviducts	- within normal limits
		pancreas	- dilatation, duct, mild
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1494	E	Microscopic	
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- hyperplasia, epithelial, nonglandular, moderate
			- inflammation, mild
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1494	Е	Microscopic	
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)
			- polyp, stromal, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1495	Е	Macroscopic	
		adrenal glands	- irregular surface, cystic, bilateral, moderate
		lymph node, axillary	- within normal limits
			draining node for mass a, right.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, right axillary area, present
			corresponds to antemortem observation (nodule)
			approximately 2.0 cm in diameter.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1495	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			corresponds to macroscopic observation (adrenal glands - irregular surface)
			- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits

Individual Animal Listing - FEMALE

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1495	E	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, moderate
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	 focus of cellular alteration, basophilic, minimal
			- focus of cellular alteration, eosinophilic, minimal
			- infiltration, mononuclear cell, minimal
			 vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1495	E	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1495	Е	Microscopic	
1433	L	small intestine, duodenum	- within normal limits
			- within normal limits
		small intestine, ileum	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- erosion/ulcer, moderate
			- inflammation, moderate
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
		Cause of Death	- pitultary turrior

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1496	S	Macroscopic	
		adrenal glands	- enlarged, right, mild
		mammary gland	 swollen/thickened, tan, generalized, mild
		pituitary gland	- enlarged, red, mild
1496	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, moderate
			corresponds to macroscopic observation (adrenal glands - enlarged)
		kidneys	 hyperplasia, transitional cell, unilateral, minimal
			 mineralization, pelvic, bilateral, minimal
			 mineralization, tubular, unilateral, minimal
			 nephropathy, chronic progressive, bilateral, minimal
			 pyelitis, unilateral, minimal
		liver	- focus of cellular alteration, eosinophilic, minimal
			 hyperplasia, bile duct, minimal
		lung	- within normal limits
		mammary gland	 hyperplasia, lobular, mild
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		pancreas	- within normal limits

Individual Animal Listing - FEMALE

_		
Iе	rm	ınal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1496	S	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	- within normal limits
1497	Е	Macroscopic	
		lymph node, inguinal	- within normal limits
			draining node for mass a, left.
		pituitary gland	- enlarged, severe
		skin, subcutis	- mass, tan, mass a, left anogenital region, present
			corresponds to antemortem observation (mass 1)
			approximately 4.5 x 2.5 x 2.5 cm.
1497	E	Microscopic	
		adrenal glands	- within normal limits

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1497	E	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
1497	E	Microscopic	
		larynx	- within normal limits
		liver	- focus of cellular alteration, eosinophilic, mild
		lung	- within normal limits
		lymph node, inguinal	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1497	Е	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1497	E	Microscopic thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits dilatation, gland/lumen, mild within normal limits pituitary tumor
1498	E	Macroscopic pituitary gland skin	 enlarged, severe hair sparse, left foreleg/limb, right foreleg/limb, mild corresponds to antemortem observation (hair sparse)
1498	E	Microscopic adrenal glands aorta bone marrow, femur	 angiectasis/cystic degeneration, focal cortical, bilateral, mild within normal limits within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1498	Е	Microscopic	
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- pyelitis, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1498	E	Microscopic	
		liver	- within normal limits
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1498	Е	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- alopecia/hypotrichosis, mild
			corresponds to macroscopic observation (skin - hair sparse)
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits

Group, Animal Number	Fate	Tissue	Observations	
50 mg/kg/day				
1498	E	Microscopic urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits within normal limits pituitary tumor 	
1499	E	Macroscopic adrenal glands liver lymph node, axillary lymph node, mandibular pituitary gland	 enlarged, bilateral, mild focus/foci, tan, left lateral lobe, mild not identified, left, no grade draining node for mass b. within normal limits draining node for mass a, left. enlarged, red, moderate 	

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1499	Е	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left lateral neck, present
			corresponds to antemortem observation (mass 1)
			approximately 8.0 x 6.0 x 4.0 cm.
			 mass, tan, mass b, left axillary area, present
			corresponds to antemortem observation (mass 2)
			approximately 11.5 x 10.0 x 4.0 cm.
		thymus	- small, moderate
1499	Е	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			corresponds to macroscopic observation (adrenal glands - enlarged)
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1499	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
0 mg/kg/day			
499	Е	Microscopic	
		liver	- focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, minimal
			- hypertrophy, hepatocyte, centrilobular, minimal
			- necrosis, focal, mild
			corresponds to macroscopic observation (liver - focus/foci, tan)
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
		a	corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1499	E	Microscopic	
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	 hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits

Individual Animal Listing - FEMALE

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Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1499	Е	Microscopic	
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			corresponds to macroscopic observation (thymus - small)
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
			one of pair present
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, minimal
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1500	S	Macroscopic	
		pituitary gland	- enlarged, moderate
1500	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, unilateral, minimal

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1500	S	Microscopic	
		kidneys	- hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
			- pyelitis, bilateral, minimal
		liver	 focus of cellular alteration, basophilic, minimal
			 focus of cellular alteration, clear, minimal
			 hematopoiesis, extramedullary, minimal
			 hyperplasia, bile duct, minimal
			 infiltration, mononuclear cell, minimal
			 vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal
			 inflammation, subacute/chronic, minimal
		pancreas	 hyperplasia, acinar cell, focal, minimal
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1500	S	Microscopic uterus with cervix	- dilatation, gland/lumen, minimal
1501	D	Macroscopic lymph node, inguinal	 not identified, left, no grade draining node for mass a.
		pituitary gland skin, subcutis	 enlarged, severe mass, tan, mass a, anogenital region, present corresponds to antemortem observation (swelling) approximately 1.5 x 1.5 x 1.0 cm.
1501	D	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal within normal limits

S - Scheduled necropsy D - Died on Study

50 mg/kg/day 1501 D Microscopic brain - compression, ventral (pituitary tumor), mild esophagus - within normal limits eyes - within normal limits eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits joint, tibiofemoral widneys - mineralization, pelvic, unilateral, minimal lacrimal glands, exorbital large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum larynx within normal limits liver - within normal limits	Group, Animal Number	Fate	Tissue	Observations
1501 D Microscopic brain - compression, ventral (pituitary tumor), mild esophagus - within normal limits eyes - within normal limits eyes, optic nerves eyes, optic nerves eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits heart - within normal limits heart - within normal limits kidneys - mineralization, pelvic, unilateral, minimal pyelitis, unilateral, minimal pyelitis, unilateral, minimal large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum large inte	50 mg/kg/day			
esophagus eyes eyes, optic nerves eyes, retina autolysis too severe for diagnosis galt harderian glands heart joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, colon large intestine, rectum large i		D	Microscopic	
eyes - within normal limits eyes, optic nerves - within normal limits eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits joint, tibiofemoral - within normal limits kidneys - mineralization, pelvic, unilateral, minimal lacrimal glands, exorbital - within normal limits large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum - within normal limits			brain	- compression, ventral (pituitary tumor), mild
eyes, optic nerves eyes, retina - within normal limits eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits joint, tibiofemoral kidneys - within normal limits kidneys - mineralization, pelvic, unilateral, minimal pyelitis, unilateral, minimal lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum large within normal limits			esophagus	- within normal limits
eyes, retina - not examined autolysis too severe for diagnosis galt - within normal limits harderian glands heart - within normal limits heart joint, tibiofemoral kidneys - within normal limits - within normal limits - within normal limits - mineralization, pelvic, unilateral, minimal - pyelitis, unilateral, minimal - pyelitis, unilateral, minimal - within normal limits			eyes	- within normal limits
autolysis too severe for diagnosis galt - within normal limits harderian glands - within normal limits heart - within normal limits joint, tibiofemoral - within normal limits kidneys - mineralization, pelvic, unilateral, minimal crimal glands, exorbital - within normal limits large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum - within normal limits largnx - within normal limits			eyes, optic nerves	- within normal limits
galt - within normal limits harderian glands - within normal limits heart - within normal limits joint, tibiofemoral - within normal limits kidneys - mineralization, pelvic, unilateral, minimal pyelitis, unilateral, minimal lacrimal glands, exorbital - within normal limits large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum - within normal limits largnx - within normal limits			eyes, retina	- not examined
harderian glands heart piont, tibiofemoral kidneys harderian glands, exorbital lacrimal glands, exorbital large intestine, cecum large intestine, rectum largynx - within normal limits within normal limits - within normal limits				autolysis too severe for diagnosis
heart joint, tibiofemoral kidneys - mineralization, pelvic, unilateral, minimal pyelitis, unilateral, minimal lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum largnx - within normal limits largnyx - within normal limits			galt	- within normal limits
joint, tibiofemoral kidneys - mineralization, pelvic, unilateral, minimal pyelitis, unilateral, minimal lacrimal glands, exorbital large intestine, cecum large intestine, colon large intestine, rectum large intestine, rect			harderian glands	- within normal limits
kidneys - mineralization, pelvic, unilateral, minimal - pyelitis, unilateral, minimal - pyelitis, unilateral, minimal - within normal limits			heart	- within normal limits
- pyelitis, unilateral, minimal lacrimal glands, exorbital - within normal limits large intestine, cecum - within normal limits large intestine, rectum - within normal limits largnx - within normal limits			joint, tibiofemoral	- within normal limits
lacrimal glands, exorbital - within normal limits large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum - within normal limits larynx - within normal limits			kidneys	- mineralization, pelvic, unilateral, minimal
large intestine, cecum - within normal limits large intestine, colon - within normal limits large intestine, rectum - within normal limits larynx - within normal limits				- pyelitis, unilateral, minimal
large intestine, colon - within normal limits large intestine, rectum - within normal limits larynx - within normal limits			lacrimal glands, exorbital	- within normal limits
large intestine, rectum - within normal limits larynx - within normal limits			large intestine, cecum	- within normal limits
larynx - within normal limits			large intestine, colon	- within normal limits
,			large intestine, rectum	- within normal limits
liver - within normal limits			larynx	- within normal limits
			-	- within normal limits
lung - within normal limits			lung	- within normal limits

50 mg/kg/day 1501 D	Microscopic lymph node, mandibular lymph node, mesenteric mammary gland nerve, sciatic nose, level a nose, level b	 within normal limits within normal limits adenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) hyperplasia, lobular, mild within normal limits within normal limits within normal limits
1501 D	lymph node, mandibular lymph node, mesenteric mammary gland nerve, sciatic nose, level a nose, level b	 within normal limits adenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) hyperplasia, lobular, mild within normal limits within normal limits
	lymph node, mesenteric mammary gland nerve, sciatic nose, level a nose, level b	 within normal limits adenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) hyperplasia, lobular, mild within normal limits within normal limits
	nerve, sciatic nose, level a nose, level b	 adenoma, benign, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a) hyperplasia, lobular, mild within normal limits within normal limits
	nerve, sciatic nose, level a nose, level b	corresponds to macroscopic observation (skin, subcutis - mass a) - hyperplasia, lobular, mild - within normal limits - within normal limits
	nose, level a nose, level b	hyperplasia, lobular, mildwithin normal limitswithin normal limits
	nose, level a nose, level b	within normal limitswithin normal limits
	nose, level a nose, level b	- within normal limits
	nose, level b	
		- within normal limits
	mana laval a	
	nose, level c	- within normal limits
	nose, level d	- within normal limits
	ovaries	- within normal limits
	oviducts	- within normal limits
	pancreas	- within normal limits
	parathyroid glands	- not examined
	pharynx	- within normal limits
	pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
		corresponds to macroscopic observation (pituitary gland - enlarged)
	salivary gland, mandibular	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
50 mg/kg/day 1501	D	Microscopic salivary gland, parotid salivary gland, sublingual skeletal muscle, biceps femoris skin small intestine, duodenum small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters	 within normal limits hyperplasia, epithelial, nonglandular, mild inflammation, mild depletion, lymphoid, generalized, severe within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1501	D	Microscopic urinary bladder uterus with cervix vagina Cause of Death	within normal limitswithin normal limitswithin normal limitspituitary tumor
1502	E	Macroscopic liver lymph node, axillary lymph node, iliac pituitary gland skin, subcutis	 focus/foci, red, multiple lobes, mild not identified, right, no grade draining node for mass b. within normal limits draining node for mass a, left. enlarged, severe mass, tan, mass a, left anogenital region, present corresponds to antemortem observation (mass 1) approximately 3.0 cm in diameter. mass, ulcerated, mass b, right axillary area, present corresponds to antemortem observation (mass 2) approximately 3.0 cm in diameter, tan.

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1502	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt harderian glands heart joint, tibiofemoral	 angiectasis/cystic degeneration, focal cortical, bilateral, mild hyperplasia, focal medullary, bilateral, minimal within normal limits compression, ventral (pituitary tumor), moderate within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1502	E	Microscopic	
		kidneys	- hyperplasia, transitional cell, unilateral, minimal
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, unilateral, minimal
			- pyelitis, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- dilatation, sinusoidal, minimal
			corresponds to macroscopic observation (liver - focus/foci, red)
			- focus of cellular alteration, basophilic, mild
		lung	- within normal limits
		lymph node, iliac	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1502	E	Microscopic	
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, minimal
			- hyperplasia, sex-cord/stromal, unilateral, minimal
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1502	E	Microscopic	
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- hyperplasia, c-cell, focal, unilateral, mild
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		-	

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1502	E	Microscopic uterus with cervix vagina Cause of Death	dilatation, gland/lumen, minimalwithin normal limitsmammary tumor
1503	Е	Macroscopic pituitary gland uterus with cervix	enlarged, moderateenlarged, focal, horn, mild
1503	E	Microscopic adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate hyperplasia, focal cortical, unilateral, mild
		aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain	 within normal limits compression, ventral (pituitary tumor), moderate

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1503	E	Microscopic	
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- within normal limits
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

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Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1503	Е	Microscopic	
		mammary gland	- hyperplasia, lobular, minimal
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, bilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1503	E	Microscopic	
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1503	E	Microscopic Cause of Death	- pituitary tumor
1504	Е	Macroscopic pituitary gland	- enlarged, red, severe
1504	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina galt	 within normal limits compression, ventral (pituitary tumor), moderate within normal limits

Group,			Tennina	
Animal Number	Fate	Tissue	Observations	
50 mg/kg/day				
1504	E	Microscopic		
		harderian glands	 hyperplasia, focal, unilateral, minimal 	
		heart	- within normal limits	
		joint, tibiofemoral	- within normal limits	
		kidneys	- mineralization, pelvic, bilateral, minimal	
			- mineralization, tubular, bilateral, minimal	
			 nephropathy, chronic progressive, bilateral, minimal 	
		lacrimal glands, exorbital	- within normal limits	
		large intestine, cecum	- within normal limits	
		large intestine, colon	- within normal limits	
		large intestine, rectum	- within normal limits	
		larynx	- within normal limits	
		liver	- within normal limits	
		lung	- histiocytosis, alveolar, minimal	
		lymph node, mandibular	- within normal limits	
		lymph node, mesenteric	- within normal limits	
		mammary gland	- hyperplasia, lobular, mild	
		nerve, sciatic	- within normal limits	
		nose, level a	- within normal limits	
		nose, level b	- within normal limits	

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1504	Е	Microscopic	
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1504	Е	Microscopic	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, moderate
			 hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	 granular cell tumor, benign, primary, incidental, not cause of death
		vagina	- within normal limits
		Cause of Death	- pituitary tumor

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1505	E	Macroscopic	
		adrenal glands	- enlarged, bilateral, mild
		harderian glands	- discoloration, tan, left, moderate
			corresponds to antemortem observation (eye protruding)
		lymph node, axillary	- within normal limits
			draining node for mass b, right.
		lymph node, inguinal	 not identified, right, no grade
			draining node for mass a.
		skin, subcutis	- mass, tan, mass a, right inguinal area, present
			corresponds to antemortem observation (mass 1)
			approximately 6.5 x 7.0 x 3.0 cm.
			 mass, tan, mass b, right axillary area, present
			corresponds to antemortem observation (mass 2)
			approximately 3.5 x 2.5 x 15 cm.
		thymus	- discoloration, red, mild
	_	uterus with cervix	- enlarged, minimal
1505	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral,
			moderate
			corresponds to macroscopic observation (adrenal glands - enlarged)
			- hyperplasia, focal cortical, unilateral, minimal
			At a Language and grant and gran

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1505	E	Microscopic	
		aorta	- within normal limits
		bone	 osteosarcoma, malignant, primary, fatal, positive cause of death corresponds to macroscopic observation (harderian glands - discoloration, tan) tumor extends from upper jaw to the back of the eye socket causing the eye to protrude. see slides 14-1, 14-1 r-1, 24 and 25.
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- inflammation, acute, unilateral, moderate
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal

E - Euthanized in extremis

Individual Animal Listing - FEMALE Terminal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1505	E	Microscopic joint, tibiofemoral kidneys lacrimal glands, exorbital large intestine, cecum large intestine, rectum larynx liver lung lymph node, axillary lymph node, mandibular lymph node, mesenteric mammary gland	 within normal limits mineralization, pelvic, bilateral, minimal within normal limits focus of cellular alteration, basophilic, minimal hyperplasia, bile duct, minimal histiocytosis, alveolar, minimal histiocytosis, sinus, mild within normal limits within normal limits fibroadenoma, benign, multiple, primary, mortality-independent corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)

multicentric neoplasm

nerve, sciatic

- hyperplasia, lobular, minimal

- degeneration, axonal/myelin, minimal

- lymphoma, malignant, multicentric, incidental, not cause of death

Individual Animal Listing - FEMALE

- 1	eri	nι	na

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1505	Е	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- cyst, unilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			- hyperplasia, diffuse, pars distalis, mild
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1505	Е	Microscopic	
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 lymphoma, malignant, multicentric, incidental, not cause of death corresponds to macroscopic observation (thymus - discoloration, red)
		thyroid gland	 adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, mild
			corresponds to macroscopic observation (uterus with cervix - enlarged)
		vagina	- within normal limits

E - Euthanized in extremis

ight, no grade
for mass a.
d, mass a, right inguinal area, present
antemortem observation (mass 1 partially cannibalized)
9.0 x 6.0 x 3.0 cm, tan.
stic degeneration, focal cortical, bilateral,
imits
fc d p st ir ir

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1506	D	Microscopic	
		brain .	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hematopoiesis, extramedullary, minimal
			- necrosis, hepatocytes, centrilobular, moderate
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		3	- histiocytosis, alveolar, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1506	D	Microscopic	
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1506	D	Microscopic	
		skin .	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, severe
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor

			Terminal
Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1507	Е	Macroscopic	
		pituitary gland	- enlarged, red, severe
1507	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		•	

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1507	Е	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- vacuolation, periportal, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1507	Е	Microscopic	
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1507	E	Microscopic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits hyperplasia, epithelial, nonglandular, moderate inflammation, mild depletion, lymphoid, generalized, severe within normal limits pituitary tumor
1508	E	Macroscopic lymph node, axillary	 not identified, right, no grade draining node for mass a.

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1508	Е	Macroscopic	
		lymph node, mediastinal	- within normal limits
			draining node for mass b.
		skin, subcutis	- mass, tan, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 10.0 x 7.0 x 4.0 cm.
		thymus	- mass, tan, mass b, present
			approximately 2.5 x 2.0 x 0.5 cm.
1508	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			- hyperplasia, focal medullary, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1508	Е	Microscopic	
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, bilateral, minimal
		•	- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- infiltration, mononuclear cell, minimal
			- necrosis, focal, minimal
			- vacuolation, periportal, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1508	Е	Microscopic	
		lung	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mediastinal	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild
		multicentric neoplasm	- lymphoma, malignant, multicentric, incidental, not cause of death
		nerve, sciatic	- degeneration, axonal/myelin, minimal
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- polyarteritis, moderate
		parathyroid glands	- not examined
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1508	E	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 lymphoma, malignant, multicentric, incidental, not cause of death corresponds to macroscopic observation (thymus - mass b)
		thyroid gland	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1508	E	Microscopic tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits mammary tumor
1509	E	Macroscopic adrenal glands lymph node, axillary mammary gland pituitary gland skin, subcutis	 cyst, left, moderate not identified, right, no grade draining node for mass a. swollen/thickened, tan, generalized, mild enlarged, red, mild mass, tan, mass a, right axillary area, present corresponds to antemortem observation (mass 1 hair sparse) approximately 10.0 x 10.0 x 4.0 cm.

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1509	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, moderate
			corresponds to macroscopic observation (adrenal glands - cyst)
			- hyperplasia, focal cortical, unilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), minimal
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- cardiomyopathy, minimal
		joint, tibiofemoral	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1509	E	Microscopic	
		kidneys	 hyperplasia, transitional cell, bilateral, minimal
			- mineralization, pelvic, bilateral, mild
			 nephropathy, chronic progressive, bilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	 focus of cellular alteration, basophilic, mild
			 focus of cellular alteration, eosinophilic, minimal
			- hyperplasia, bile duct, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	 erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, moderate
			corresponds to macroscopic observation (mammary gland - swollen/thickened)
		nerve, sciatic	- degeneration, axonal/myelin, minimal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1509	E	Microscopic	
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- degeneration/necrosis, olfactory epithelium, minimal
		ovaries	- hyperplasia, sex-cord/stromal, bilateral, mild
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- hyperplasia, focal, unilateral, mild
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- degeneration/necrosis, myofiber, minimal
		skin	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1509	Е	Microscopic	
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, minimal
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
			- hyperplasia, epithelial cell, minimal
		thyroid gland	 adenoma, c-cell, benign, unilateral, primary, incidental, not cause of death
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- dilatation, gland/lumen, moderate
			- thrombus, mild

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1509	E	Microscopic	
		vagina	- within normal limits
		Cause of Death	- mammary tumor
1510	D	Macroscopic	
		pituitary gland	- enlarged, red, moderate
1510	D	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations	
50 mg/kg/day				
1510	D	Microscopic		
		galt	- within normal limits	
		harderian glands	- within normal limits	
		heart	- cardiomyopathy, minimal	
		joint, tibiofemoral	- within normal limits	
		kidneys	- mineralization, pelvic, unilateral, minimal	
		•	- mineralization, tubular, bilateral, minimal	
		lacrimal glands, exorbital	- within normal limits	
		large intestine, cecum	- within normal limits	
		large intestine, colon	- within normal limits	
		large intestine, rectum	- within normal limits	
		larynx	- within normal limits	
		liver	- within normal limits	
		lung	- within normal limits	
		lymph node, mandibular	- within normal limits	
		lymph node, mesenteric	- within normal limits	
		mammary gland	- hyperplasia, lobular, mild	
		nerve, sciatic	- within normal limits	
		nose, level a	- within normal limits	
		nose, level b	- within normal limits	
		,		

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day	_		
1510	D	Microscopic	and the second s
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Individual Animal Listing - FEMALE Terminal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1510	D	Microscopic small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus	 within normal limits within normal limits within normal limits within normal limits hematopoiesis, extramedullary, increased, minimal within normal limits within normal limits depletion, lymphoid, generalized, mild hyperplasia, epithelial cell, minimal
		thyroid gland tongue	within normal limitswithin normal limits

- within normal limits

- pituitary tumor

trachea

ureters

vagina

urinary bladder

uterus with cervix

Cause of Death

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1511	E	Macroscopic	
		pituitary gland	- cyst, red, moderate
1511	Е	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), mild
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits

Individual Animal Listing - FEMALE Terminal

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Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1511	E	Microscopic	
		kidneys	- mineralization, pelvic, bilateral, minimal
			 nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- hyperplasia, bile duct, minimal
			- infiltration, mononuclear cell, minimal
		lung	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1511	Е	Microscopic	
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - cyst)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1511	E	Microscopic stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits depletion, lymphoid, generalized, moderate hyperplasia, epithelial cell, minimal within normal limits pituitary tumor
1512	D	Macroscopic all tissues	- within normal limits
1512	D	Microscopic adrenal glands	- within normal limits

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1512	D	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- schwannoma, malignant, primary, fatal, positive cause of death
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		-	

Individual Animal Listing - FEMALE Terminal

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1512	D	Microscopic	
		larynx	- within normal limits
		liver	- necrosis, hepatocytes, centrilobular, severe
		lung	- histiocytosis, alveolar, minimal
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- within normal limits
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits

D - Died on Study

		16	erminai	
Group, Animal Number	Fate	Tissue	Observations	
50 mg/kg/day				
1512	D	Microscopic		
		salivary gland, sublingual	- within normal limits	
		skeletal muscle, biceps femoris	- within normal limits	
		skin	- within normal limits	
		small intestine, duodenum	- within normal limits	
		small intestine, ileum	 within normal limits 	
		small intestine, jejunum	 within normal limits 	
		spinal cord, cervical	 within normal limits 	
		spinal cord, lumbar	 within normal limits 	
		spinal cord, thoracic	 within normal limits 	
		spleen	 within normal limits 	
		stomach, glandular	 within normal limits 	
		stomach, nonglandular	 within normal limits 	
		thymus	 within normal limits 	
		thyroid gland	 within normal limits 	
		tongue	 within normal limits 	
		trachea	 within normal limits 	
		ureters	 within normal limits 	
		urinary bladder	 within normal limits 	
		uterus with cervix	 within normal limits 	

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1512	D	Microscopic vagina Cause of Death	within normal limitsschwannoma
1513	E	Macroscopic all tissues	- within normal limits
1513	E	Microscopic adrenal glands aorta bone marrow, femur bone marrow, sternum bone, femur bone, sternum brain esophagus eyes eyes, optic nerves eyes, retina	 angiectasis/cystic degeneration, focal cortical, bilateral, mild within normal limits lymphoma, malignant, multicentric, fatal, positive cause of death lymphoma, malignant, multicentric, fatal, positive cause of death within normal limits

E - Euthanized in extremis

D - Died on Study

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1513	E	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- lymphoma, malignant, multicentric, fatal, positive cause of death
		kidneys	- within normal limits
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- lymphoma, malignant, multicentric, fatal, positive cause of death
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- hyperplasia, lobular, minimal
		multicentric neoplasm	- lymphoma, malignant, multicentric, fatal, positive cause of death
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- lymphoma, malignant, multicentric, fatal, positive cause of death

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1513	E	Microscopic	
		nose, level c	- lymphoma, malignant, multicentric, fatal, positive cause of death
		nose, level d	- lymphoma, malignant, multicentric, fatal, positive cause of death
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	- within normal limits
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle	 lymphoma, malignant, multicentric, fatal, positive cause of death slide 20 and 21.
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1513	E	Microscopic spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder uterus with cervix vagina Cause of Death	 within normal limits within normal limits hematopoiesis, extramedullary, increased, moderate lymphoma, malignant, multicentric, fatal, positive cause of death within normal limits within normal limits depletion, lymphoid, generalized, moderate within normal limits hyperplasia, squamous cell, mild inflammation, subacute/chronic, mild within normal limits within normal limits within normal limits dilatation, gland/lumen, mild metaplasia, squamous, mild within normal limits lymphoid tumor

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1514	E	Macroscopic	
		animal/whole body	- body fat depleted, mild
			corresponds to antemortem observation (thin)
		pituitary gland	- enlarged, moderate
1514	E	Microscopic	
		adrenal glands	- within normal limits
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1514	E	Microscopic joint, tibiofemoral kidneys lacrimal glands, exorbital	 within normal limits mineralization, tubular, bilateral, minimal nephropathy, chronic progressive, unilateral, minimal within normal limits
		large intestine, cecum large intestine, colon large intestine, rectum larynx liver lung	 within normal limits
		lymph node, mandibular lymph node, mesenteric mammary gland nerve, sciatic nose, level a nose, level b	 within normal limits within normal limits hyperplasia, lobular, mild within normal limits within normal limits within normal limits
		nose, level c nose, level d ovaries	 within normal limits within normal limits within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1514	E	Microscopic	
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1514	E	Microscopic	
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- pituitary tumor
1515	E	Macroscopic	
		lymph node, mandibular	- within normal limits
		-	left, draining node for mass a.
		pituitary gland	- enlarged, red, moderate

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1515	Е	Macroscopic	
		skin, subcutis	- mass, ulcerated, mass a, ventral neck, present
			corresponds to antemortem observation (mass 1)
			approximately 8.0 x 6.0 x 3.5 cm. mass a extends across left ventral neck and down left forelimb. is tan in color.
1515	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	 hyperplasia, granulocytic, mild
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits

E - Euthanized in extremis

Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1515	Е	Microscopic	
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- dilatation, tubular, bilateral, mild
			- mineralization, pelvic, bilateral, minimal
			- mineralization, tubular, bilateral, minimal
			- nephropathy, chronic progressive, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
			- vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1515	Е	Microscopic	
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, minimal
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	 adenoma, islet cell, benign, primary, incidental, not cause of death
			- atrophy, acinar, mild
			- fibrosis, minimal
		parathyroid glands	- not examined
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
50 mg/kg/day 1515	E	Microscopic salivary gland, parotid salivary gland, sublingual skeletal muscle, biceps femoris skin small intestine, duodenum small intestine, ileum small intestine, jejunum spinal cord, cervical spinal cord, lumbar spinal cord, thoracic spleen stomach, glandular stomach, nonglandular thymus thyroid gland tongue trachea ureters urinary bladder	 within normal limits hematopoiesis, extramedullary, increased, mild within normal limits within normal limits within normal limits within normal limits depletion, lymphoid, generalized, severe within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1515	E	Microscopic uterus with cervix vagina Cause of Death	dilatation, gland/lumen, minimalwithin normal limitsmammary tumor
1516	S	Macroscopic foot/feet	 ulcer, plantar/palmar, mild corresponds to antemortem observation (ulcer plantar/palmar)
		lymph node, axillary	 within normal limits draining node for mass a, left.
		lymph node, iliac	 within normal limits draining node for mass c, bilateral.
		lymph node, inguinal	 not identified, right, no grade draining node for mass b.

S - Scheduled necropsy E - Euthanized *in extremis*

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1516	S	Macroscopic	
		skin, subcutis	- mass, tan, mass a, left axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 2.0 cm in diameter.
			- mass, tan, mass b, right inguinal area, present
			corresponds to antemortem observation (mass 2)
			approximately 2.0 cm in diameter.
		uterus with cervix	- mass, tan, mass c, horn, present
			corresponds to antemortem observation (swelling)
			approximately 1.0 cm in diameter.
1516	S	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, mild
			 hyperplasia, focal medullary, unilateral, minimal
		kidneys	 mineralization, pelvic, bilateral, minimal
			 nephropathy, chronic progressive, bilateral, mild
			- pyelitis, unilateral, minimal

S - Scheduled necropsy

Group,			
Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1516	S	Microscopic	
		liver	 focus of cellular alteration, basophilic, mild
			 hematopoiesis, extramedullary, minimal
			- hyperplasia, bile duct, minimal
			 vacuolation, periportal, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, iliac	- dilatation, sinus, minimal
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b)
			- fibroadenoma, benign, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
		pancreas	- within normal limits
		stomach, nonglandular	- within normal limits
		tongue	- within normal limits
		uterus with cervix	 adenocarcinoma, malignant, primary, incidental, not cause of death
			corresponds to macroscopic observation (uterus with cervix - mass c)
			- dilatation, gland/lumen, mild

S - Scheduled necropsy

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1517	E	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass b, right.
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass c.
		lymph node, mandibular	- discoloration, red, bilateral, mild
			draining node for mass a, left.
		pituitary gland	- enlarged, severe
		skin, subcutis	- mass, tan, mass b, right axillary area, present
			corresponds to antemortem observation (nodule)
			approximately 3.0 cm in diameter.
			- mass, tan, mass c, left inguinal area, present
			approximately 3.0 cm in diameter.
			- mass, ulcerated, mass a, left lateral neck, present
			corresponds to antemortem observation (ulcer mass 1)
			approximately 6.0 cm in diameter, tan.
		spleen	- enlarged, moderate
1517	E	Microscopic	
		adrenal glands	 angiectasis/cystic degeneration, focal cortical, bilateral, minimal
			 hematopoiesis, extramedullary, bilateral, minimal

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1517	Е	Microscopic	
		aorta	- within normal limits
		bone marrow, femur	- hyperplasia, granulocytic, mild
		bone marrow, sternum	- hyperplasia, granulocytic, minimal
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- hyperplasia, transitional cell, unilateral, minimal
		•	- mineralization, pelvic, bilateral, mild
			- pyelitis, bilateral, mild
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1517	Е	Microscopic	
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
		lung	- histiocytosis, alveolar, minimal
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
			corresponds to macroscopic observation (lymph node, mandibular - discoloration, red)
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass b; skin, subcutis - mass c)
			 hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1517	Е	Microscopic	
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- within normal limits
		parathyroid glands	- within normal limits
		pharynx	- within normal limits
		pituitary gland	 adenoma, pars distalis, benign, primary, incidental, not cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1517	E	Microscopic	
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	 hematopoiesis, extramedullary, increased, moderate
			corresponds to macroscopic observation (spleen - enlarged)
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, severe
			- hyperplasia, epithelial cell, minimal
		thyroid gland	- within normal limits
		tongue	- within normal limits
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		Cause of Death	- mammary tumor

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1518	Е	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass a, right.
		pituitary gland	- enlarged, mild
		skin, subcutis	- mass, ulcerated, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 3.0 cm in diameter, tan.
1518	E	Microscopic	
		adrenal glands	- within normal limits
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits
		brain	- within normal limits
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1518	E	Microscopic	
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, tubular, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- focus of cellular alteration, basophilic, minimal
			- hematopoiesis, extramedullary, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		lymph node, mandibular	- within normal limits
		lymph node, mesenteric	- within normal limits
		mammary gland	- adenocarcinoma, malignant, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a)
			- hyperplasia, lobular, mild

Group, Animal Number	Fate	Tissue	Observations	
50 mg/kg/day				
1518	Е	Microscopic		
		nerve, sciatic	- within normal limits	
		nose, level a	- within normal limits	
		nose, level b	- within normal limits	
		nose, level c	- within normal limits	
		nose, level d	- within normal limits	
		ovaries	- within normal limits	
		oviducts	- within normal limits	
		pancreas	- within normal limits	
		parathyroid glands	- within normal limits	
		pharynx	- within normal limits	
		pituitary gland	- within normal limits	
		salivary gland, mandibular	- within normal limits	
		salivary gland, parotid	- within normal limits	
		salivary gland, sublingual	- within normal limits	
		skeletal muscle, biceps femoris	- within normal limits	
		skin	- within normal limits	
		small intestine, duodenum	- within normal limits	
		small intestine, ileum	- within normal limits	
		small intestine, jejunum	- within normal limits	

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1518	Е	Microscopic	
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- hematopoiesis, extramedullary, increased, mild
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	- depletion, lymphoid, generalized, moderate
		thyroid gland	- within normal limits
		tongue	- erosion/ulcer, mild
			- hyperplasia, squamous cell, moderate
			- inflammation, subacute/chronic, mild
		trachea	- within normal limits
		ureters	- within normal limits
		urinary bladder	- within normal limits
		uterus with cervix	- within normal limits
		vagina	- within normal limits
		non-correlated macro observation	- pituitary gland - enlarged
		Cause of Death	- mammary tumor

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1519	Е	Macroscopic	
		lymph node, axillary	- within normal limits
			draining node for mass a, right.
		lymph node, inguinal	- not identified, left, no grade
			draining node for mass b.
		pituitary gland	- enlarged, red, severe
		skin, subcutis	- mass, tan, mass a, right axillary area, present
			corresponds to antemortem observation (mass 1)
			approximately 4.0 cm in diameter.
			- mass, tan, mass b, left inguinal area, present
			approximately 2.0 cm in diameter.
1519	E	Microscopic	
		adrenal glands	- angiectasis/cystic degeneration, focal cortical, bilateral, mild
			 hyperplasia, focal medullary, unilateral, mild
		aorta	- within normal limits
		bone marrow, femur	- within normal limits
		bone marrow, sternum	- within normal limits
		bone, femur	- within normal limits
		bone, sternum	- within normal limits

E - Euthanized in extremis

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1519	Е	Microscopic	
		brain .	- compression, ventral (pituitary tumor), moderate
		esophagus	- within normal limits
		eyes	- within normal limits
		eyes, optic nerves	- within normal limits
		eyes, retina	- within normal limits
		galt	- within normal limits
		harderian glands	- within normal limits
		heart	- within normal limits
		joint, tibiofemoral	- within normal limits
		kidneys	- mineralization, pelvic, unilateral, minimal
		lacrimal glands, exorbital	- within normal limits
		large intestine, cecum	- within normal limits
		large intestine, colon	- within normal limits
		large intestine, rectum	- within normal limits
		larynx	- within normal limits
		liver	- fibrosis, minimal
			- necrosis, focal, minimal
		lung	- within normal limits
		lymph node, axillary	- within normal limits
		iyinpii nodo, daliidiy	With Hornar miles

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1519	E	Microscopic	
		lymph node, mandibular	- erythrocytosis/erythrophagocytosis, sinus, minimal
		lymph node, mesenteric	- within normal limits
		mammary gland	- fibroadenoma, benign, multiple, primary, mortality-independent
			corresponds to macroscopic observation (skin, subcutis - mass a; skin, subcutis - mass b)
			- hyperplasia, lobular, mild
		nerve, sciatic	- within normal limits
		nose, level a	- within normal limits
		nose, level b	- within normal limits
		nose, level c	- within normal limits
		nose, level d	- within normal limits
		ovaries	- within normal limits
		oviducts	- within normal limits
		pancreas	- hyperplasia, acinar cell, focal, minimal
		parathyroid glands	- within normal limits
			one of pair present
		pharynx	- within normal limits

Group, Animal Number	Fate	Tissue	Observations
50 mg/kg/day			
1519	E	Microscopic	
		pituitary gland	 adenoma, pars distalis, benign, primary, fatal, positive cause of death
			corresponds to macroscopic observation (pituitary gland - enlarged)
		salivary gland, mandibular	- within normal limits
		salivary gland, parotid	- within normal limits
		salivary gland, sublingual	- within normal limits
		skeletal muscle, biceps femoris	- within normal limits
		skin	- within normal limits
		small intestine, duodenum	- within normal limits
		small intestine, ileum	- within normal limits
		small intestine, jejunum	- within normal limits
		spinal cord, cervical	- within normal limits
		spinal cord, lumbar	- within normal limits
		spinal cord, thoracic	- within normal limits
		spleen	- within normal limits
		stomach, glandular	- within normal limits
		stomach, nonglandular	- within normal limits
		thymus	 depletion, lymphoid, generalized, moderate